

## Rocky Flats Environmental Technology Site

MAN-076-FDPM  
REVISION 1FACILITY DISPOSITION  
PROGRAM MANUAL

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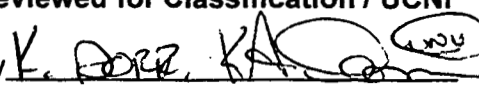
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## 1.0 INTRODUCTION

The Facility Disposition Program Manual (FDPM or Manual) establishes the requirements for planning and executing work based on regulations, agency agreements, consent orders, and Site infrastructure requirements for the disposition of facilities at the Rocky Flats Environmental Technology Site (RFETS or Site) in accordance with the Rocky Flats Cleanup Agreement (RFCA) and the Decommissioning Program Plan (DPP).

This Manual also provides guidance and requirements to Project Managers (PMs) for identifying and implementing the facility disposition requirements including Site requirements and provides implementation tools, e.g., templates, tables, process flow charts, checklists, etc., to aid the PMs in performing their duties.

### 1.1 APPLICABILITY AND USE

This Manual applies to all Site employees and subcontractors performing or supporting facility disposition work. The requirements in this manual **SHALL** be used for all facility disposition projects. Any changes or revisions to this manual **SHALL** be approved by the Kaiser-Hill Company, L.L.C. (K-H), Closure Projects Integration Division Manager for Decontamination and Decommissioning (D&D).

This Manual identifies mandatory elements and requirements by using the word "**SHALL**." Additionally, the manual uses the word "**Should**" to indicate a recommendation that is based on standards and good business practices. The word "**may**" is used when permission is granted rather than constituted as a requirement. Facility disposition activities that were initiated prior to the establishment of this manual **SHALL** obtain written exception from the requirements of this document, as appropriate, from the D&D Division Manager.

### 1.2 OVERVIEW

Table 1-1, Section Overview provides an overview of each of the chapters contained in this Manual and their corresponding appendices.

### 1.3 DEFINITIONS & ACRONYMS

All definitions and acronyms referred to throughout this manual are contained in Appendix H, Glossary. The following definitions, and the definitions provided in Appendix H, Glossary, apply to the facility disposition process at RFETS. The RFETS specific definitions provided in this Manual take precedence over definitions in the Rocky Flats Plant (RFP) Dictionary or other Level 1 Program Manuals.

Consistent with RFCA and the DPP, the FDPM follows the RFCA convention insofar as the term "building" may mean a building, portion thereof, structure, system or component.

**Building Stabilization**, as used for the facility disposition process at RFETS for deactivation activities in non-SNM buildings, means:

Table 1-1 SECTION OVERVIEW		
	Section Contents	Appendices
<b>SECTION 1</b> INTRODUCTION	<ul style="list-style-type: none"> <li>Manual Purpose, Applicability, Section Overview</li> <li>Responsibilities</li> <li>Records, References</li> </ul>	<b>Appendix A</b> A-1 Generic D&D Project File Index A-2 Project Deliverables Matrix A-3 D&D Document Review Matrix
<b>SECTION 2</b> FACILITY DISPOSITION PROCESS	<ul style="list-style-type: none"> <li>Overview of Regulatory Framework</li> <li>Overview of Facility Disposition (High Level Flow Chart)</li> <li>Overview of Planning Process Phases (All elements, and Key Process Element Descriptions (<i>Facility Type, Decision Document, Characterization Process, &amp; PEP</i>))</li> <li>Overview of Execution Phases for Facility Disposition</li> </ul>	<b>Appendix B</b> B-1 Type 1 Facility Disposition Checklist B-2 Listing of Facilities by "Anticipated" Type
<b>SECTION 3</b> PROJECT INITIATION AND SCOPING	<ul style="list-style-type: none"> <li>Scoping Elements</li> <li>Establishing the Project Team (<i>Roles &amp; Responsibilities, Qualifications, Regulatory Interfaces</i>)</li> <li>Project Team Kick-off</li> <li>Scoping Characterization</li> <li>Joint Scoping Meeting w/LRA</li> <li>Initial Development of: Scoping PEP, Waste, AB, Contracting, RCRA Permitting, etc., Strategies</li> <li>Project Files &amp; Administrative Records</li> <li>Preliminary Options Analysis</li> </ul>	<b>Appendix C</b> C-1 Project Execution Plan Template C-2 WMP Format C-3 Daily Construction Report C-4 Monthly Personnel Resource Usage Report C-5 Construction Progress Photographs
<b>SECTION 4</b> PHASE I PLANNING	<ul style="list-style-type: none"> <li>Reconnaissance Level Characterization (RLC)</li> <li>RLC Plan/Report, Review &amp; Approval Cycles</li> <li>Options &amp; Feasibility Studies</li> <li>Update to Strategies &amp; Plans</li> <li>Engineering Studies &amp; Assessments</li> <li>Update to PEP</li> </ul>	
<b>SECTION 5</b> PHASE II PLANNING & ENGINEERING	<ul style="list-style-type: none"> <li>Decision Document Requirements</li> <li>Authorization Basis</li> <li>IWCP &amp; Engineering Design Packages</li> <li>Final PEP</li> <li>Other Planning Characterizations</li> </ul>	<b>Appendix D</b> D-1 Statement of Work D-2 Instructions for Subcontractor Pool Application D-3 Decision Document Guidance D-4 Decision Document Template
<b>SECTION 6</b> EXECUTION	<ul style="list-style-type: none"> <li>Readiness Determinations</li> <li>Training Requirements</li> <li>Physical Work Preparation &amp; Site Preparation</li> <li>Dismantlement Activities</li> <li>In-Process Characterization, Final &amp; Validation Surveys</li> <li>Demolition</li> <li>Transition to Environment Restoration</li> <li>Waste Management</li> </ul>	<b>Appendix E</b> E-1 Core Training Requirements D&D Worker
<b>SECTION 7</b> PROJECT CLOSEOUT	<ul style="list-style-type: none"> <li>Project Acceptance &amp; Close-Out Documentation Standards</li> <li>Project Reporting Standards and Required Reports</li> <li>Division 1 Specifications</li> <li>Project Acceptance and Close-Out Tasks and Documentation (Beneficial Occupancy, Project Acceptance &amp; Transfer)</li> <li>Final Project Closeout Report</li> <li>Lessons Learned</li> </ul>	<b>Appendix F</b> F-1 Partial & Complete Subcontract CloseOut Form F-2 Project Beneficial Occupancy Notice F-3 Project Acceptance And Transfer Form F-4 Project Final Closeout Form (FPCO)
<b>SECTION 8</b> REFERENCES	<ul style="list-style-type: none"> <li>References</li> </ul>	
<b>SECTION 9</b> APPENDICES	<ul style="list-style-type: none"> <li>Appendices (All above plus Appendix G)</li> </ul>	G-1 Glossary & Acronyms

These are activities necessary to remove a building from operation and place the building in a safe and stable condition so that the building and its contents are in a condition that eliminates or mitigates hazards and ensures adequate protection to workers, the public and the environment. Activities necessary to achieve and maintain building stabilization may include inventory and removal of hazardous materials from the facilities and immediate areas, such as regulated hazardous chemicals, beryllium, and gas cylinders, roof repairs over critical areas, asbestos abatement and/or encapsulation, and repack of existing waste crates in questionable condition.

Building stabilization is achieved when the facility is in a safe and stable condition while awaiting further disposition and/or decommissioning, dismantlement, and demolition.

*Note: Building stabilization applies to non-nuclear buildings.*

**Deactivation**, as defined in RFCA paragraph 25(y) means:

*" . . . the process of placing a building, portion of a building, structure, system, or component (as used in the rest of this paragraph, "building") in a safe and stable condition to minimize the long-term cost of a surveillance and maintenance program in a manner that is protective of workers, the public, and the environment. Actions during deactivation could include the removal of fuel, draining and/or de-energizing of nonessential systems, removal of stored radiological and hazardous materials and related actions. As the bridge between operations and decommissioning, based upon Decommissioning Operations Plans or the Decommissioning Program Plan, deactivation can accomplish operations-like activities such as final process runs, and also decontamination activities aimed at placing the building in a safe and stable condition. Deactivation does not include decontamination necessary for the dismantlement and demolition phase of decommissioning, i.e., removal of contamination remaining in fixed structures and equipment after deactivation. Deactivation does not include removal of contaminated systems, system components, or equipment except for the purpose of accountability of Special Nuclear Material SNM and nuclear safety. It also does not include removal of contamination except as incidental to other deactivation or for the purposes of accountability of SNM and nuclear safety."*

*Note: Deactivation terminology applies to nuclear buildings.*

The following are examples of potential end points for deactivation. Not all end points will apply in all buildings that go through a deactivation process:

- A determination that the probability of a criticality event in the building is considered not credible;
- Removal of all combustibles that are not integral parts of the building;
- Removal of all classified materials;
- A shift in primacy from Atomic Energy Act oversight of the Defense Nuclear Facility Safety Board (DNFSB) to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulation through RFCA by the Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE).

Activities such as waste chemical removal, disposition of excess property, chemical hazards reduction and placement of Resource Conservation and Recovery Act (RCRA) units into RCRA stable condition, or their closure, may occur either during deactivation or

decommissioning. The DPP has been clarified to allow the removal of fixed equipment and systems in buildings undergoing the disposition process. Fixed equipment and systems means those items that are attached to the floors or walls or ceiling of a building, but are not connected to building systems that could provide a pathway for contaminants to reach the environment. Fixed equipment that is connected to building systems may be removed in accordance with the DPP with agreement from DOE and the LRA. The DPP Section 1.1.5 outlines the requirements for removal of certain fixed equipment or systems.

**Decommissioning**, as defined in RFCA paragraph 25(z) means:

*" . . . for those buildings, portions of buildings, structures, systems or components (as used in the rest of this paragraph, "building") in which deactivation occurs, all activities that occur after the deactivation. It includes surveillance, maintenance, decontamination and/or dismantlement for the purpose of retiring the building from service with adequate regard for the health and safety of workers and the public and protection of the environment. For those buildings in which no deactivation occurs, the term includes characterization as described in Attachment 9, surveillance, maintenance, decontamination and/or dismantlement for the purpose of retiring the building from service with adequate regard for the health and safety of workers and the public and protection of the environment. The ultimate goal of decommissioning is unrestricted use or, if unrestricted use is not feasible, restricted use of the buildings."*

**Disposition**, as defined in RFCA Attachment 9, means:

*" . . . the sequence of activities required to take a building/facility from its existing condition to its final disposition."*

The term building/facility disposition is used to describe the entire building/facility disposition process. It includes removal of property, waste, chemicals, Special Nuclear Material (SNM), and holdup; stripout of fixed equipment; decontamination; demolition; waste removal or emplacement; and the characterization and planning necessary to support any or all of the above. Building/facility disposition is distinguished from landlord activities in that landlord activities are those that occur in order to keep a building in its current, operating condition. The primary planning document for the facility disposition process is the Project Execution Plan (PEP). Project Baseline Document (PBDs) are the documents by which Department of Energy (DOE) approves the annual work scope and budget that is derived from the PEP.

*NOTE: SNM and residue elimination activities specifically covered elsewhere are considered part of the facility disposition process; however, these activities do not require a RFCA decision document.*

**Mothballing**, as defined in section 3.3.4 of the DPP, means:

*" . . . placing a building in a condition where it is no longer actively occupied. Ventilation, heating and air conditioning, and fire detection and protection systems may be turned off. Sump pumps to remove groundwater infiltration may be operating."*

The DPP requires that a Reconnaissance Level Characterization Report (RLCR) be submitted to the Lead Regulatory Agency (LRA) prior to mothballing a facility. In addition, if DOE chooses to "mothball" a facility, DOE will submit a hazards analysis of the facility

specific conditions for the mothballed period, meet with the LRA to discuss any potential hazards or releases to the environment which might occur during the mothball period, devise actions to mitigate potential releases in collaboration with the LRA and propose adequate monitoring methods to monitor any release.

#### **1.4 RESPONSIBILITIES**

The following section provides a summary of the primary responsibilities for the group responsible for implementation and execution of facility disposition projects. These responsibilities are not meant to be all encompassing.

##### **1.4.1 Vice President, Closure Project Integration (CPI)**

The Vice President, CPI, has overall programmatic and compliance responsibility for all closure projects and facility disposition projects. The Vice President, CPI has the following responsibilities:

- Provides overall management guidance for all programs and projects under the charter of Closure Projects.
- Develops new or expanded programs and provides support for the programs.
- Ensures safety through implementation of the Integrated Safety Management philosophy.
- Interfaces with Environmental Systems and Stewardship (ESS) Vice President, DOE, EPA, and CDPHE.
- Oversees CPI cost and schedule budgeting and reporting information from Divisional Managers and Project Managers and establishes the Closure Project Baseline (CPB).
- Ensures that facility disposition activities under the CPI charter comply with the requirements of this Manual.
- Provides resources for the CPI group necessary to implement the Site quality assurance (QA) requirements and initiating, implementing, and communicating the requirements of the Site Quality Assurance Program (QAP).
- Assesses the effective implementation of the Site QAP within the CPI group through periodic management assessments.
- Ensures integration of facility disposition and environmental restoration actions.

##### **1.4.2 Vice President, Nuclear Operations**

The Vice President, Nuclear Operations is responsible for ensuring that facility disposition activities under the Nuclear Operations charter comply with the requirements of this Manual.

##### **1.4.3 Vice President, Safeguards, Security, Site Operations and Integration**

The Vice President, Site Operations is responsible for ensuring that facility disposition activities under the Site Operations' charter comply with the requirements of this Manual.

#### **1.4.4 Vice Presidents, All Organizations**

The Vice President from each organization is responsible for providing Subject Matter Experts (SME) support to facility disposition projects.

#### **1.4.5 Division Manager, Decontamination and Decommissioning**

The Division Manager, Decontamination and Decommissioning (D&D) is the primary point of contact with internal and external customers, clients, or regulators in coordination with RFCA Project Coordinators for all issues surrounding facility disposition projects. The D&D Division Manager has the following responsibilities:

- Ensures that facility disposition processes, tools, and techniques described in the manual are in accordance with the requirements contained in the RFCA and the DPP.
- Provides for interpretation, implementation, continuous improvement, maintenance, and approval of this Manual
- Approves all CPI PEPs and Waste Management Plans (WMPs). If the project is not currently assigned to CPI, the D&D Division Manager must concur with the PEP (signature on the document coversheet) that it meets the requirements of this manual.
- Approves (for release to DOE and other stakeholders) all Decommissioning Operations Plans (DOP), Proposed Action Memorandum (PAM), Interim Measure/Interim Remedial Action (IM/IRA), RFCA Standard Operating Protocols (RSOP), and RFCA documents as required by this Manual for all facility disposition projects.
- Reviews and reports on CPI performance measures, cost and schedule variances, and Baseline Change Proposals (BCP) and initiates corrective actions as necessary.
- Performs oversight on all facility disposition projects being conducted at the RFETS to ensure compliance with external and internal regulations and requirements, including quality assurance, environmental compliance, and health & safety.

#### **1.4.6 Manager, D&D Project Execution**

The D&D Project Execution Manager is the primary point of contact for the execution of assigned facility disposition activities. The D&D Project Execution Manager has the following responsibilities:

- Performs oversight on assigned CPI facility disposition projects being conducted at the RFETS to ensure compliance with external and internal regulations and requirements, including quality assurance, environmental compliance, and health & safety.
- Ultimate responsibility, accountability, and authority in any matter involving CPI facility disposition project execution.
- Provides expert judgement, and assists in planning of projects. If applicable, initiates tests and research that will contribute to project objectives.
- Monitors project reports for assigned projects to ensure that the reports are kept current and project milestones are met.

#### 1.4.7 Manager, D&D Advanced Planning

The D&D Advanced Planning Manager is the primary point of contact for the planning and preparation activities associated with facility disposition including 2006 schedule coordination, P&I interface, and characterization activity interface. The D&D Advanced Planning Manager has the following responsibilities:

- Updates this Manual and assures Manual compliance with RFCA and DPP requirements.
- Implements the program requirements for the Site's facility disposition process.
- Develops site wide processes for the facility disposition effort. e.g., decontamination procedures, decontamination processes, etc.
- Implements Site processes needed for facility disposition, e.g., GSA, HUD.
- Provides single point of contact for the facility disposition document reviews and establishes facility disposition document consistency for the Site.
- Assigns lead reviewers and technical writers to review facility disposition project documents.

#### 1.4.8 Manager, D&D Project Controls

The D&D Project Controls Manager maintains the D&D Cost Model, and provides input to the CPB and provides technical oversight of the WBS elements.

#### 1.4.9 Manager, Construction Services

The K-H Construction Manager is responsible for safe and effective execution of all assigned site-construction projects. Included in this responsibility are the following:

- Provides direction to ensure applicable construction tasks are accomplished within authorized schedule and budget constraints.
- Directs and oversees activities of assigned personnel to ensure safe, reliable, cost-effective and efficient site construction activities.
- Establishes professional standards and expectations for all personnel within the organization and enforces accountability among them.
- Provides technical and administrative guidance to personnel within the organization.
- Plans and establishes the organization's management systems and performance measures to monitor, assess, and implement improvements.
- Reviews, approves and publishes relevant construction plans, schedules, and status reports as appropriate.
- Ensures that clear and effective vertical and horizontal communication are available for all members of the construction organization.
- Assures that all individuals within the organization understand and follow the appropriate site and construction procedures.
- Administers the construction organization's training, qualification, and certification program, as required.
- Performs routine walk-through inspections of assigned areas and documents deficiencies for correction or resolution.
- Accountable for the safety of all activities performed by direct reports and other applicable personnel with implicit "stop work" authority.

#### 1.4.10 Kaiser-Hill Project Managers/Directors

The K-H Project Manager/Director (referred to within as PM) has ultimate responsibility, accountability, and authority in any matter involving their specific assigned disposition project. The K-H Project Manager/Director has the following responsibilities:

- Responsible for managing their assigned project within the authorized funding and approved work scope and schedule.
- Integrates activities of subcontractors and Site personnel and interfaces with regulatory agencies and DOE.
- Ensures that a project-specific administrative record file is created and maintained throughout the project.
- Ensures compliance with all regulatory and infrastructure requirements.
- Reviews, concurs, and implements all major planning documents, Decision documents, PEP, Authorization Basis (AB), Waste Management Plans, etc., associated with the project.
- Requests assistance from facility and Site safety management programs to oversee certain aspects of the work.
- Ensures that project teams, when required, are made up of the properly qualified safety personnel and subject matter experts.
- Implements the decisions made by the use of this Manual in the execution of planning, analysis, procedure writing, work package generation, and development of decision documents.
- Ensures that the primary subcontractor executes the work within the assigned scope of work, on time, and within budget.

#### 1.4.11 Primary Subcontractor Project Managers

The Primary Subcontractor PMs have the following responsibilities:

- Identifies all activities within their areas of responsibility that require planning and collects available information.
- Ensures project is performed within cost, scope, and schedule.
- Coordinates staff, directs, and controls the project implementation through completion.
- Requests assistance from facility and Safety Management Program Subject Matter Experts to assist in developing the assessments of activity hazards and in selecting the appropriate work planning level.
- Ensures that teams, when required, are made up of the properly qualified safety personnel and subject matter experts.
- Implements the decisions made by the use of this manual in the execution of planning, analysis, procedure writing, work package generation, and development of decision documents.
- Support K-H PM with regulatory and DOE interface requirements.

#### 1.4.12 Subject Matter Experts (SMEs)

SMEs support development and implementation of facility disposition documents in accordance with the regulatory requirements in this Manual, the *RFETS Decontamination and Decommissioning Characterization Protocol* (DDCP), environmental compliance, and the appropriate Safety Management Programs (SMPs). SMEs also provide input into the work



document planning and development process to develop a product that will implement the elements of this Manual, while also ensuring efficiency and workability are incorporated.

#### 1.4.13 All Employees

All employees are responsible for following the requirements of this Manual and identifying and reporting Site health, safety, quality, and environmental concerns or deficiencies as a routine element of their normal activities.

### 1.5 RECORDS

Records generated by this Manual are considered QA records. The PM maintains and dispositions the screening decision documents in accordance with 1-V41-RM-001, *Records Management Guidance for Records Sources*.

Records identified as Administrative Records (ARs) **SHALL** be maintained in accordance with 1-F78-ER-ARP-001, *CERCLA Administrative Records Program* to be placed in the project specific administrative record file.

See also Section 3, Scoping, Section 7, Project Closeout, and Appendix A for more specific information on project files and Administrative Records.

## 2.0 FACILITY DISPOSITION PROCESS

The purpose of this Section is to provide the user with an overview of:

- The regulatory framework for facility disposition, e.g., the RFCA and the DPP requirements;
- How the RFCA and DPP have been incorporated into the Site's FDPM as programmatic requirements so as to ensure a consistent and standardized approach to performing facility disposition activities across the Site;
- A brief description of the overall facility disposition process, including flowcharts, and each of the process elements, referencing where in the Manual further detailed descriptions can be found;
- Discussions of key or cross-cutting topics of the facility disposition planning process not explicitly covered in the Chapters 3-7 discussion of project phases, including:
  - The PEP
  - Facility characterization
  - Worker and public safety and environmental values
  - Quality assurance/quality control
  - Decommissioning work breakdown structure and project control
  - Deactivation activities and process
  - Decommissioning activities
  - Environmental restoration activities
  - Transferring landlord responsibilities if it is determined that such a change is required

## 2.1 REGULATORY FRAMEWORK

On July 19, 1996, the DOE, EPA and CDPHE executed the RFCA. RFCA is the Federal Facility Agreement pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Consent Order under the RCRA and Colorado Hazardous Waste Act (CHWA). RFCA replaces the Interagency Agreement between these parties that had been in place since 1991 and regulates the Site cleanup under the three statutes.

The Rocky Flats Vision (Vision), RFCA Appendix 9, guides all activities at the Site. Among other things, the Vision for Rocky Flats is to achieve accelerated cleanup and closure of the Site in a safe, environmentally protective manner, and in compliance with applicable state and federal environmental laws and agency agreements. All work done at the Site to achieve the Vision is scheduled through a unified planning process that is captured in the CPB, as described in RFCA ¶¶ 136 to 141.

RFCA coordinates DOE's response obligations under CERCLA, closure obligations under CHWA and corrective action obligations under CHWA and RCRA, as well as activities not regulated under the Federal Facility Compliance Act (FFCA) for treatment of mixed wastes generated by RFCA-regulated activities.

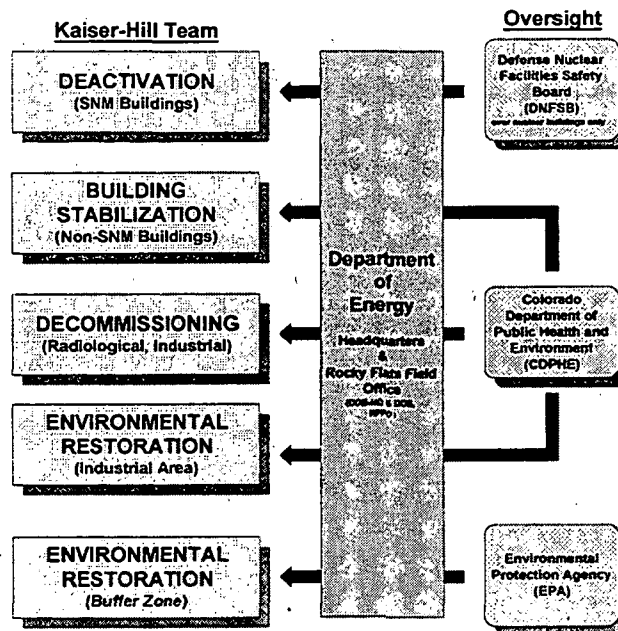
As required by RFCA, the DPP establishes the regulatory framework to be used for the disposition of facilities at the RFETS. Decommissioning of contaminated facilities **SHALL** not start without the approval of a RFCA decision document. The DPP describes the screening process for determining what activities require a RFCA decision document and establishes the process for obtaining regulatory approval to start decommissioning activities.

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Many activities do not require RFCA decision documents or RFCA decisions. These activities include, but are not limited to, real and personal property disposition under federal property management requirements, relocation of mission components to other DOE sites, RCRA closures, day-to-day operation of the site to provide protection to the worker, public and the environment, and ongoing hazard reduction efforts.

Figure 2-1 depicts the various regulatory oversight authorities and decision-makers for the Site. This Figure is not intended to be all inclusive, but rather to provide a simplified view of the primary or LRA for each life-cycle phase of the Sites' closure projects. The term LRA is used in this Manual to define the regulatory agency that is the assigned approval authority. The LRA functions as the primary communications and correspondence point of contact with the Project Manager. The Project Manager also interfaces with the Support Regulatory Agency (SRA) and provides documents to the SRA for review, as needed. The LRA coordinates technical reviews with the SRA and consolidates comments assuring technical and regulatory consistency and completeness.

Figure 2-1



### 2.1.1 FACILITY CLASSIFICATION TYPE

For planning purposes, each RFETS facility has been preliminarily screened by K-H into one of three types; Type 1, Type 2, or Type 3 (see Appendix B-2 for the Listing of Facilities by "Anticipated" Type). This identification is based on the differing levels of contamination (radioactive and non-radioactive) known or believed to exist within the facility. Each facility "Type" has its own degree of regulation via the RFCA and the DPP. The final decision on the facility type is determined by RFFO after the RLCR is completed, and will be discussed during the Joint Scoping Meeting (See Section 3) held between DOE and the LRA. The type will be finalized after the submittal and subsequent review and concurrence of RLCR (See Section 4) by the LRAs.

**Excerpted from Section 2.2 of the Decommissioning Program Plan**

***Type 1 Buildings free of contamination***

"Free of contamination" means that the following conditions have been met:

- Hazardous wastes, if any, generated and/or stored in the facility have been previously removed in accordance with CHWA and RCRA requirements and any RCRA units have been closed or, if partially closed, the parts of the unit within the facility have been certified as being clean closed; (It will be insufficient to have RCRA units simply in a RCRA stable configuration.); AND
- Routine surveys for radiological contamination performed pursuant to the RFETS radiological protection program show the building is not contaminated; AND
- Surveys, if required, for hazardous substance contamination show the building is not contaminated, AND
- If any hazardous substances including polychlorinated biphenyls (PCBs) or asbestos are present, they are an integral part of the building's structural, lighting, heating, electrical, insulation or decorative materials. As such, they are not "contamination."

Since the presence or absence of physical or safety hazards, while important to the Site in terms of how to proceed with a building's disposition, is not a determinant of whether it will be regulated pursuant to RFCA, DOE will not consider such hazards in categorizing a building as Type 1.

***Type 2 Buildings without significant contamination or hazards, but in need of decontamination***

Type 2 buildings contain some radiological contamination or hazardous substance contamination. The extent of the contamination is such that routine methods of decontamination should suffice and only a moderate potential exists for environmental releases during decommissioning. Some buildings in this category, e.g., 865, 886 and 991, are now undergoing, or will undergo deactivation in certain areas prior to decommissioning. The mere fact that deactivation will occur does not push a building into the Type 3 category. Most buildings where industrial operations occurred that used hazardous substances or radioactive materials or both will fall into this category.

***Type 3 Buildings with significant contamination and/or hazards***

Type 3 buildings contain extensive radiological contamination, usually as a result of plutonium processing operations or accidents. Contamination may exist in gloveboxes, ventilation systems, or the building structure. Site personnel expect those buildings that were used for plutonium component production, along with the major support buildings for such production, will have significant contamination, and are therefore expected to be classified as Type 3. These buildings include:

• 371/374	• 559	• 771/774
• 707	• 776/777	• 779

Project Managers will need to review the facility type, using the Anticipated Facility Type List provided in Appendix B-2, prior to the Scoping phase of planning.

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### 2.1.2 Project Generated RFCA Decision Documents

Prior to decommissioning, certain authorizing RFCA Decision Documents or RFCA decisions or application of Section 1.1.5 of the DPP must be in place before work activities can begin. The type of authorization may be dependent on the facility's Type. In accordance with RFCA Part 7, all parties have agreed to participate in the consultative process to reach consensus on the scope and content of the RFCA Decision Documents, including any required changes that may be proposed during the course of the project.

Once a facility's classification or type is concurred with by the LRA, it **does not** change unless discovery of unknown or additional contaminants. A consultative process is used to determine if the facility type needs to be placed in a higher classification via the RFCA and DPP. A Type 3 building is not down graded to a Type 1 or 2 as it is progressively decontaminated.

The four types of Decision Documents that have been established for decommissioning activities are discussed further in Section 5 and listed below:

- PAM, used for activities less than 6 months in duration
- IM/IRA, used for activities longer than 6 months in duration
- DOP, generally used only for Type 3 buildings
- RFCA Standard Operating Protocol (RSOP), may be used for repetitive decommissioning activities regardless of the facility type
- The DPP is used as the decision-document for Type I facilities.

For **Type 1** facilities, the RLCR is sent to DOE who approves with the recommendations in the RLCR and sends the RLCR to the LRA. The results of the characterization provide the LRA with sufficient knowledge of the hazards and contamination in the facility for them to concur that it's a Type 1. Development of a RLCR is further discussed in Section 5.

For **Type 2** facilities, the RLCR is sent to DOE who approves with the recommendations in the RLCR and sends the RLCR to the LRA. The LRA either concurs or not with the facility type.

*Note: If DOE, as a RFCA party, disagrees with the LRA decision, then DOE may elect to go into dispute resolution.*

For **Type 3** facilities, the RLCR is sent to DOE who approves with the recommendations in the RLCR and sends the RLCR to the LRA. The LRA either concurs or not with the facility type.

*Note: Additional non-RFCA authorizing documents may also be necessary before decommissioning can commence. These documents include, but are not limited to, Nuclear Safety AB documents, e.g., Basis of Interim Operations (BIO), Facility Safety Analysis Reports (FSARs), as defined in the Nuclear Safety Manual and as described for Facility Disposition purposes, in Section 5.*

## 2.2 FACILITY DISPOSITION PLANNING PROCESS

Facility disposition encompasses a wide range of activities ranging from deactivation and decontamination to final demolition or release of the building for reuse. Planning and execution must move toward a well-integrated parallel approach where all of these activities **may** occur at any time, simultaneously, within the facility, under the appropriate regulatory decision-making

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framework. Figure 2-2 provides a high-level process flowchart of the facility disposition process. Figure 2-3 provides a more detailed look at some of the key processes depicted in Figure 2-2.

In order to discuss the activities within the planning and execution of the decommissioning portion of a facility disposition project, it is convenient to define phases within which these activities would nominally be conducted. These phases are discussed briefly below, along with their purpose and the chapter in which the activities are discussed in detail.

#### Scoping (Section 3)

The Scoping phase consists of the initial planning effort to define the project approach, scope, cost, and schedule and establish the project team. Prior to this phase, planning is conducted at the programmatic level and project parameters (e.g. cost, waste) are based on parametric models. This phase typically occurs in parallel and is coordinated with deactivation and/or hazards reduction in the context of the overall facility disposition project.

#### Phase I Planning (Section 4)

In Phase I Planning, the initial planning assumptions are investigated and the planning refined. The principal effort is the characterization of the facility, which establishes the existing conditions, better defines the scope of work, and permits the feasibility of approaches to be determined. At the completion of this phase, the execution activities are defined and are ready to be planned in detail.

#### Phase II Planning & Engineering (Section 5)

This phase consists of the activities necessary to begin execution, such as development of procedures, preparing for readiness reviews, and procurement of equipment and services. The regulatory decision document is also approved. It includes the detailed planning – work package development – that occurs shortly before physical work. A project may have Phase II Planning occurring for one area concurrent with physical deactivation in the same area, and mission activities or dismantlement occurring in adjacent areas within the facility.

#### Project Execution (Section 6)

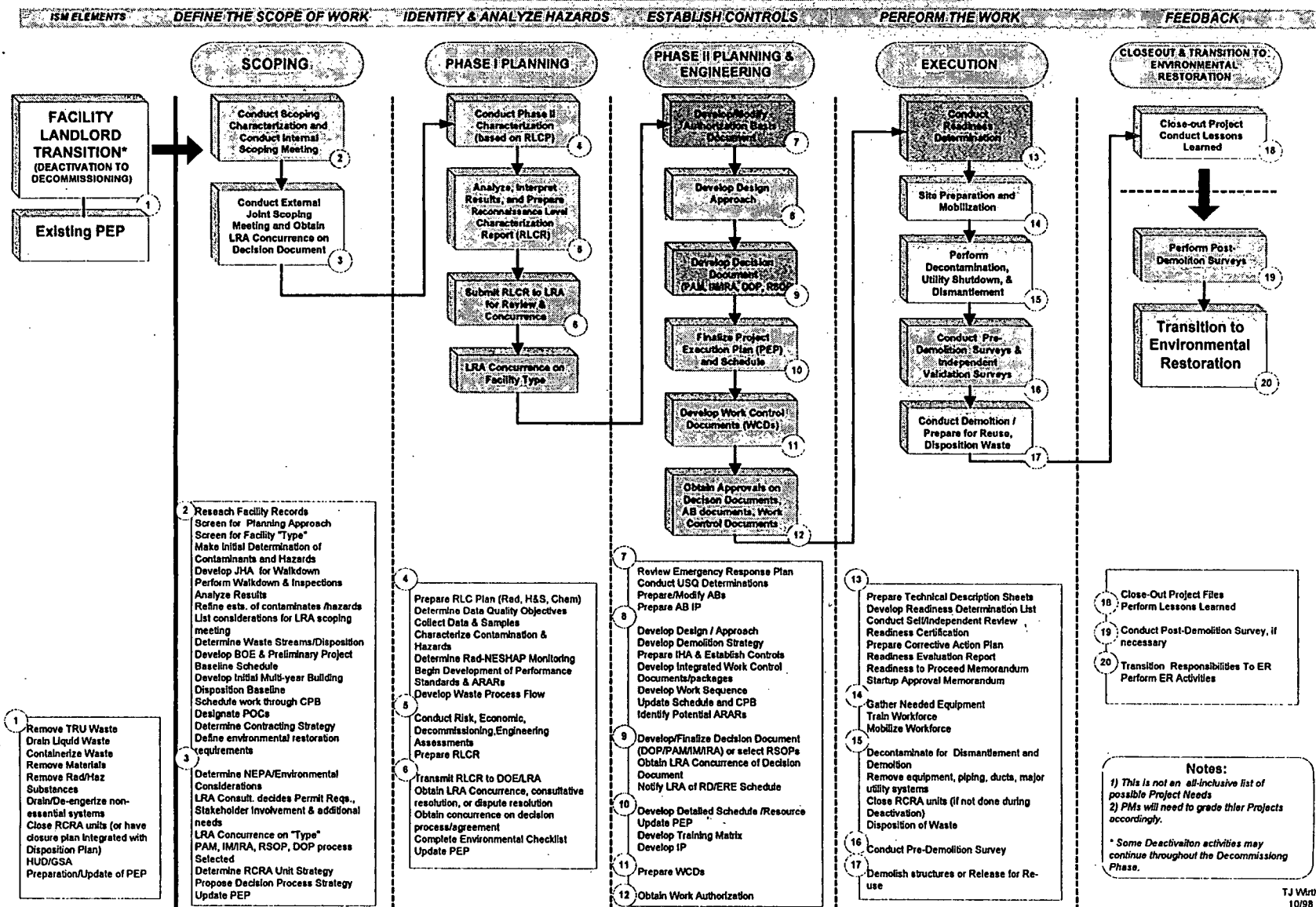
Project Execution includes the physical dismantlement of internal and external facility equipment, decontamination of the building structure, and the demolition of the facility. It begins with the readiness determination/reviews and concludes with the demolition of the facility and removal of the slab. The Environmental restoration activities are integrated with the end of this phase.

#### Project Close-out (Section 7)

The final phase of decommissioning in a facility disposition project, this phase covers the activities necessary to complete project and regulatory closure of the work. It is primarily an administrative effort and may be conducted in parallel with environmental restoration work. Its purpose is to make sure follow-on actions and Site closeout (both regulatory and property management) are facilitated.

FACILITY DISPOSITION SCHEMATIC

Figure 2-2



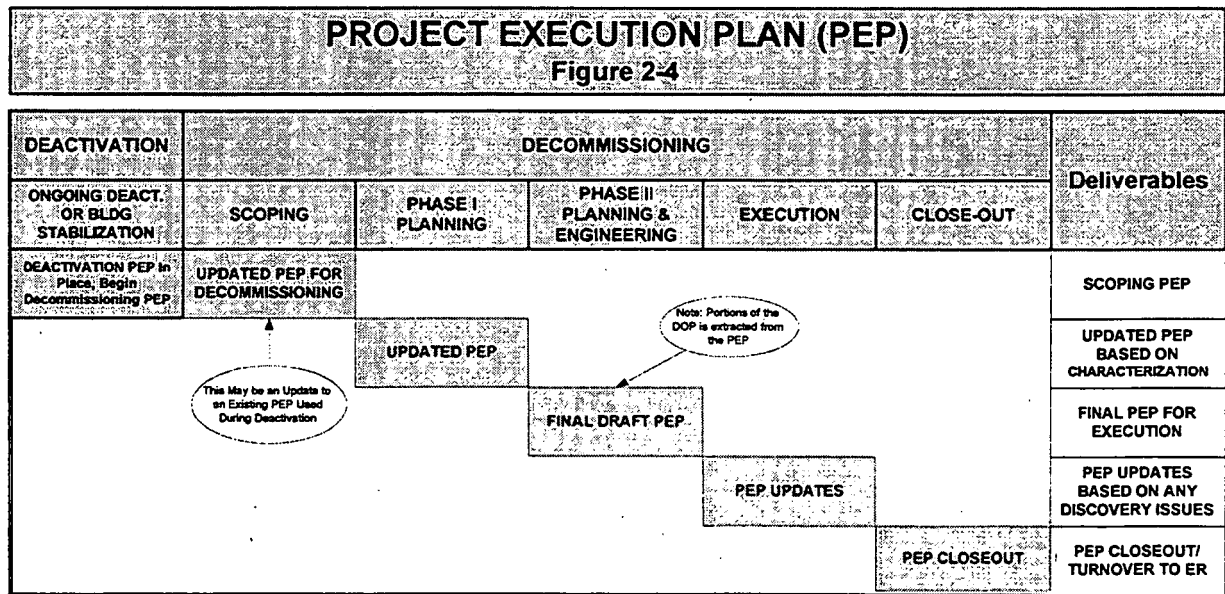
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## 2.3 CROSS-CUTTING TOPICS IN THE FACILITY DISPOSITION PLANNING PROCESS

Discussions of key or crosscutting topics of the facility disposition process are provided below. In some cases the topics are relevant to all phases of decommissioning. In other cases, while external to the decommissioning portion of the project, their interfaces with decommissioning are extremely important to the success of the overall project.

### 2.3.1 PROJECT EXECUTION PLAN (PEP)

The facility disposition PEP is considered a “living” document that is maintained up-to-date throughout the life cycle of the project as depicted in Figure 2-4. The PEP presents key information on what the project is (scope), and how much information is required (Phase I and II Planning), and how long it will be performed (Execution). PEP's are required for all facility disposition projects (this includes Deactivation as well as Decommissioning). The PEP documents project expectations and work processes. A copy of the current version of the PEP should routinely be provided to the DOE project point of contact for review, and may be provided to the LRA and SRA for review when requested. The copies are provided to DOE and regulators for information and are not approved by them. DOE may use PEPs as supporting information, in conjunction with the PRD and BCPs, to approve a projects scope, schedule, and budget. The PEP is graded based on the complexity of the project and contains planning deliverables and summarizes the results of the detailed project development and engineering activities.



PEPs are approved by the K-H D&D Division Manager, or designee. Facility disposition projects not assigned to CPI are to have their PEP approved by the responsible manager and concurred with by the D&D Division Manager. The PEP **Should** be graded to the level commensurate with the project, for instance, a PEP for disposition of B779 would require a much greater level of planning, assessment, plans, details, etc, than the disposition of a construction trailer, or a facility that contained no radiological or non-radiological hazardous materials. A PEP Template is provided in Appendix C-1.



*NOTE: Project Managers **SHALL** use the template format provided for in Appendix C, identifying with a "NA" those sections not applicable to their project, and grading the level of detail for each section commensurate with the project needs. This ensures consistency and standardization of the process and products, and facilitates the review and approval cycle. For Type 1 Facilities, it is expected that the PEP be no more than a few pages. See Section 2 for further PEP expectations for Type 1 facilities.*

The Project Deliverables Matrix contained in Appendix A-2 provides a listing of the various plans, documents, and reports, that *may* be necessary for a given project. Project Managers **SHALL** review the matrix and ensure those items that are necessary and appropriate for their project are completed prior to and during each planning phase, and then during execution. The PEP is updated during each phase of the project, including Execution. At project end, the PEP is closed out and placed in the project files.

A key element in the decommissioning project planning process, and an appendix to the PEP, is the Waste Management Plan (WMP). The WMP provides an estimate of the magnitude of project wastes, identifies hard-to-dispose of wastes, and describes how these waste types are integrated into the overall Site waste management infrastructure. Identifying the types and magnitudes of waste to allow other Site support organizations to plan their support to the project, such as delivery of waste container, disposal contracts, waste storage prior to disposition, maintaining or closing treatment units, etc. Guidance for developing a WMP is given in Appendix C-2.

**PROJECT EXECUTION PLAN ELEMENTS BY PHASE**

**SCOPING**

- Asset disposition strategy
- Type 1 Facility Disposition Checklist (as appropriate)
- Decision Document approach
- Initial review of ARARs, and identification of administrative vs. substantive requirements
- Initiate Environmental Checklist (including air and water)
- Organization and responsibilities, etc.
- Pre-conceptual scope, schedule, and budget estimates
- Project contracting strategy
- Project waste environmental management strategy – establish management practices for process versus remediation waste
- Proposed Authorization Basis strategy
- Proposed milestones including deactivation endpoints
- Proposed project activities and technical approach
- RCRA Unit closure approach
- Scoping characterization
- Specific proposed execution methods, where unique or important to project decision making
- Well-defined scope, budget, and estimate for Phase 1 Planning
- Consent order and other agency agreement requirements

**PHASE I – PLANNING**

- Conceptual scope, schedules, and budget estimates.
- Defined scope, budgets, and estimate for Phase 2 Planning
- Description of expected engineering and IWCP work packages, including scope, cost, and schedule,
- Engineering Assessments
- Health and safety impacts
- Environmental requirements and impacts
- More detailed hazards characterization
- Proposed milestones including deactivation endpoints
- Proposed project activities

**PHASE II – PLANNING AND ENGINEERING**

- Final Health & Safety Plan
- Final detailed budget and schedule
- Final procurement & contracting strategy
- Final Waste Management Plan
- Final engineering design packages & work control packages
- Approved AB document.

**EXECUTION**

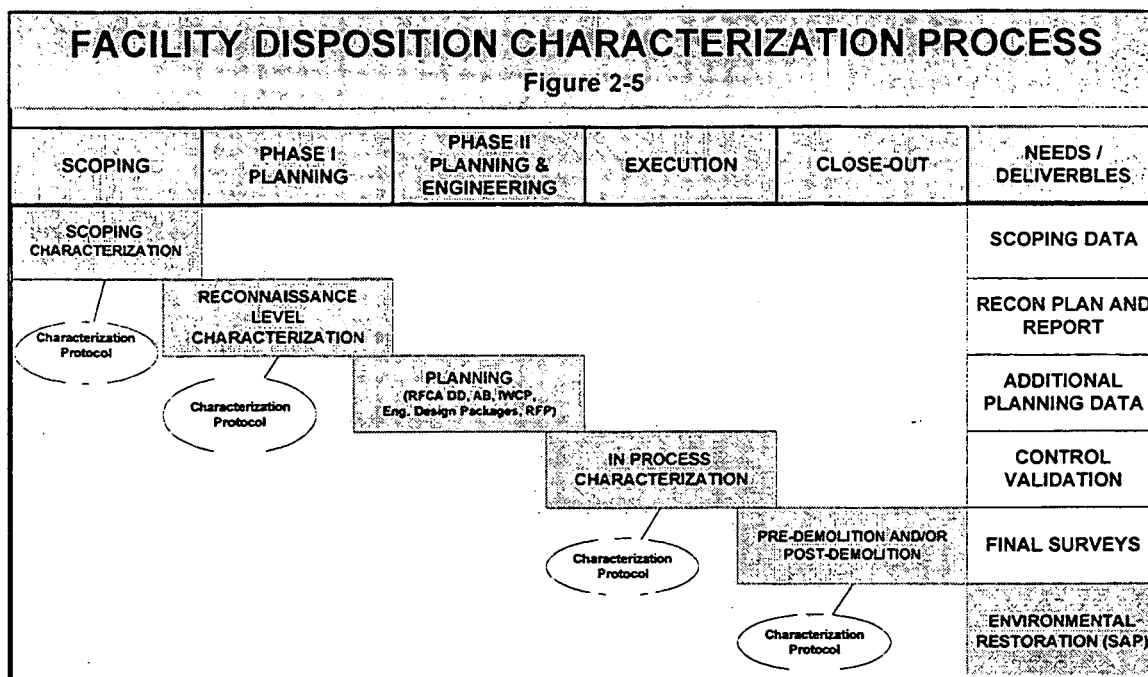
- Updates as necessary to keep the document current due to in process surveys and “discovery” issues that *may* require document revisions.

**CLOSEOUT**

- Final review of the matrix(s) to ensure completion/collection of all project documents, and plans, etc.

**2.3.2 FACILITY CHARACTERIZATION**

For purposes of facility disposition, characterization is a continual process throughout the disposition of the facility and is accomplished over several phases as depicted in Figure 2-5. Characterization planning and characterization field activities are part of RFCA decommissioning and **SHALL** be preceded by internal scoping meetings.



If the characterization changes the environmental checklist, it **SHALL** be reviewed and updated appropriately. Reconnaissance level characterization has two primary purposes. The first is the identification of hazards necessary to establish controls to protect the worker, the public, and the environment. This is accomplished per the Site-wide Reconnaissance Level Characterization Plan (RCLP) to the extent necessary, to prepare, submit, and obtain concurrence from the LRA, the RLCR, which contains the results of the characterization. The RLCR provides the basis for the final recommendation to DOE on the facility "type", i.e., Type 1, Type 2, or Type 3.

The collection of characterization data required the RLCR follows the guidance provided for in the RLCP. The characterization process described within that document ensures a consistent and systematic approach in obtaining characterization data regarding the physical hazards, radiological hazards, and non-radiological hazardous materials in the activity/facility. It uses a Data Quality Objective (DQO) process that identifies type, quality, and quantity of data. The DQO process helps the user to define DQO qualitative and quantitative statements that accomplish the following:

- Clarify technical and quality objectives,
- Define the appropriate type of data, and
- Specify tolerable levels of potential decision errors needed to establish a basis for quality and quantity of data for decision-making.

The second purpose of the RLC is to collect any additional data, e.g., written documentation, walkdowns, or physical sampling, necessary for developing and finalizing the various authorizing work documentation finalized in Phase II Planning, and as needed for project execution. Examples of additional data elements are engineering & design data; other facility concurrent and ongoing activities; utility systems; and equipment.

### DETAILED CHARACTERIZATION ELEMENTS

**Scoping Characterization** - occurs during the Scoping Phase and includes:

- Collection of all historical documentation regarding the facility mission, operations, and abnormal events (e.g., spills), including agency records
- Current and documented radiological survey reports and Radiological Improvement Reports
- Health and Safety routine surveillance reports
- Environmental and waste reports
- Authorization Basis documents (Site, SAR, BIOs, FSARs, BFOs, etc)
- Incident reports
- Prior facility resident/operator interviews
- Other informational reports or data, etc.

**Reconnaissance Level Characterization** - occurs during Phase I Planning and includes:

- Identification of radiological hazards, e.g., stored radioactive sources, contaminated areas, SNM, etc.
- Identification of non-radiological hazardous constituents and/or substances, e.g., beryllium, asbestos, polychlorinated biphenyls (PCBs), lead and other heavy metals, etc.
- Identification of physical safety hazards

**Planning & Engineering ("Characterization")** - *may* be initiated during Phase I, but is completed during Phase II Planning and includes:

- Identification of engineered systems, e.g., ventilation, electrical, process, structural, criticality, radiological systems as needed for both the conduct of the activity(s), Authorization Basis issues, and development of a strategy for determining the best approach for system removal, especially in relation to radiological and non-radiological contaminants hold-up.
- Identification of concurrent activities

**"In-Process" Characterization** - occurs during the Project Execution Phase and includes:

- In-Process surveys for radiological and non-radiological hazardous constituents and/or substances (*per Protocol*)
- Physical hazards, e.g., noise, confined spaces, excessive heights, electrical, etc. necessary for continuing facility disposition activities.

**Pre-demolition Survey ("Characterization")** - occurs near the end of the Project Execution Phase and prior to facility demolition and includes:

- *Pre-Demolition Survey*
- Independent Verification/Validation Survey (*Note: DOE will determine if required*)

**Environmental Restoration ("Characterization")** - occurs prior to Environmental Disposition and includes:

- Post-Demolition Survey of the remaining concrete slab, if necessary
- Final Surveys of various waste forms prior to shipment to designated waste disposal areas

### 2.3.3 WORKER AND PUBLIC SAFETY AND ENVIRONMENTAL VALUES

Maintaining a safety awareness culture is enhanced through the use of the philosophy and principles of the Integrated Safety Management System (ISMS). These principles are essential in the design and development of the various planning documents listed below. It is incumbent on the PM and project team to maintain a focus on these principles during development of work control documents, and to follow the guidelines provided in the Integrated Work Control Program (IWCP).

The K-H Team is committed to continued excellence, leadership and stewardship in protecting the environment. Environmental protection is a primary management responsibility as well as, the responsibility of every employee and supplier of services and products to our organization. It is management's responsibility to ensure environmental concerns are built into all project control documents and to integrate environmental information into all levels of project management. The Site Environmental Stewardship program is part of the Site infrastructure and includes environmental management systems and tools defining environmental and programmatic elements to measure and verify compliance and to mitigate impacts to the

environment. It is the PM's responsibility to ensure these systems and tools are incorporated as applicable at the project level.

### 2.3.4 QUALITY ASSURANCE AND QUALITY CONTROL

This section defines the requirements and controls that are employed and implemented by K-H to perform facility disposition with adequate technical defensibility, and provides a roadmap of the documents, procedures, and standards applicable to facility disposition activities. Quality assurance/quality control (QA/QC) criteria listed in this section supplement the K-H *Quality Assurance Program* (QAP) by emphasizing requirements applicable to planning and implementation of decommissioning activities. The application and implementation of these criteria into items and services shall be consistent with the graded approach and applied in project specific documents. In practical terms, the graded approach requires selective application of QA requirements and control to items and services commensurate with their importance to safety and project objectives. The QA/QC standards that apply to the overall facility disposition process are 10 CFR 830.120, *Quality Assurance Requirements*, and DOE Order 5700.6C, *Quality Assurance*. These standards are the overriding requirements at RFETS and are the basis of the K-H QAP.

#### Personnel Training and Qualification

All facility disposition personnel shall receive training in the procedures and be qualified to perform the activities required. The extent of training must be proportional to the education, experience, and proficiency of the individual, and the scope, complexity, and nature of the activity. Training must be designed to achieve initial proficiency and to maintain that proficiency over the course of work activities. Records of training, including testing to demonstrate qualification, must be documented.

#### Quality Improvement

Quality improvement shall be realized through use of a systematic means of identifying, tracking, and correcting issues (deficiencies, nonconformances, issues, etc.). Issues may be identified by any project personnel, at any time, through formal documentation of issues as stated in 1-MAN-012-SCARM, *Site Corrective Action Requirements Manual*. The extent of causal analysis and corrective action shall be commensurate with the significance of the failure or problem. Lessons learned shall be communicated to staff from management where appropriate. The following documents implement quality improvement requirements:

- Site Corrective Action Requirements Manual (1-MAN-012-SCARM)
- Site Integrated Oversight Manual (1-MAN-013-SIOM)
- Site Lessons Learned/Generic Implications Requirements Manual (1-S27- ADM-16.18)
- Radiological Improvement Reports (1-H02-HSP-3.02)
- Stop Work Action (1-V10-ADM-15.02)
- Occurrence Reporting Process (1-D97-ADM-16.01)
- Performance Indication and Trend Analysis (1-E93-ADM-16.18)
- Control of Non-conforming Items (1-A65-ADM-15.01)
- Control of Waste Nonconformances (2-U76-WC-4030)
- RFETS Radiological Control Manual (Site RCM)

### **Document Control, Records & Data Management**

The document control process is described in procedure MAN-063-DC, *Document Control Program Manual*. Essential policies, plans, procedures, decisions, data, and transactions of the project shall be documented to an appropriate level of detail. Records will be maintained in accordance with 1-V41-RM-001, *Records Management Guidance for Records Sources*. Documents and records that are to be placed in the CERCLA administrative record shall be dispositioned in accordance with 1-F78-ER-ARP-001, *CERCLA Administrative Records Program*.

### **Work Process**

All facility disposition activities will be executed using the RFETS IWCP. The IWCP requires the preparation of work packages that provide work control and incorporates the *Integrated Safety Management* (ISM) principles. The ISM principles ensure workers are involved in the planning, hazard identification, and implementation of the demolition activities. The IWCP review process evaluates the activity, hazard identification, mitigation measures and compliance with the authorization basis documents.

### **Design**

Design controls are specified in the *Conduct of Engineering Manual* (COEM) and the *Site Engineering Requirements Manual* (SERM).

### **Procurement**

Procurement quality requirements shall be delineated in procurement and subcontract documents. All SOWs distributed by companies at RFETS shall be reviewed by quality personnel for quality requirements to ensure that adequate quality controls are imposed on the subcontractor. Ongoing oversight of the subcontractor shall be performed to ensure that these controls are implemented. Procurement requirements are implemented through the following documents:

- Procurement System Manual
- Acquisition Procedure for Requisitioning Commodities and Services (1-W36-APR-111)

### **Inspection & Acceptance Testing**

The inspection, testing and calibration of items, services and process, including equipment is controlled through the COEM, SERM, IWCP, and procurement, metrology, Control of Measuring and Testing Equipment programs (Measuring and Test Equipment Management Manual, MAN-092-M&TEM), and 1-PRO-072-001, *Inspection and Acceptance Test Process*.

### **Management and Independent Assessments**

Management assessments shall be planned, scheduled and performed by project management to assess an organization performing work to determine if the objectives, goals and processes are adequate. Management assessment shall be documented through reports, internal memoranda, or other suitable reporting means.

Independent assessments are performed by personnel who are not directly responsible for the work to establish whether the prevailing management structure, policies, practices, procedures and data are adequate for ensuring that the quality of the results based on the risk and performance indicators needed are obtained. Deficiencies will be identified, tracked and closed in accordance with the *Site Corrective Action Requirements Manual*. Assessment requirements are implemented through the following documents:

- Kaiser-Hill Management Assessment Program (3-W24-MA-002)
- Site Integrated Oversight Manual (1-MAN-013-SIOM)

### 2.3.5 WASTE MANAGEMENT

Waste management for the project is performed in accordance with the PEP, RFCA Decision Document, WMP, and Site waste management procedures specifying packaging and handling requirements. The Site Waste Management Organization **SHALL** be notified of an estimated project waste generation, by category (i.e., low level, low level mixed, sanitary, transuranic, transuranic mixed, and hazardous). If, during the in-process characterization or at any time during the execution phase of the project, the estimated waste generation rate changes significantly, the Principal Subcontractor PM **SHALL** notify the Site Waste Management Organization of that change. In addition, the WMP **SHALL** be updated to reflect the significant changes in generation rates. Appendix C-2 provides guidance to the development of WMPs.

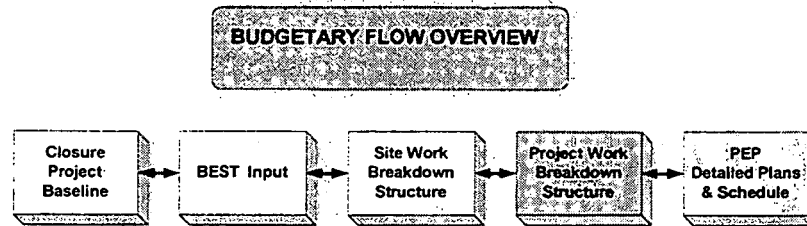
Waste containers are procured following the criteria specified in the WMP. All wastes **SHALL** be generated, managed, certified, and dispositioned in accordance with the following procedures, as appropriate:

- Hazardous Waste Requirements Manual 1-10000 HWR
- Transuranic (TRU) Waste Management Manual 1-MAN-008-WM-001
- Low Level Waste Management Plan 94-RWP/EWQA-0014
- Waste Characterization Generations and Packaging, 1-PRO-079-WGI-001
- Transportation Manual
- PCB Management Plan
- Offsite Waste Management Program, 1-MAN-037-OWMP

All government property, real or personal, must be accounted for and in some cases *may* require special disposition. The project **SHALL** follow the requirements in the Property Management Manual (PMM) 1-MAN-009-PMM. The requirements for Property Disposition are contained in Section 5 of the PMM. Before any property can be removed from a facility in any form it must be accounted for. In general, property will either be free released and shipped to PU&D for disposition, shipped from a RFETS contaminated area to another contaminated area in the DOE Complex, or disposed of as waste.

### 2.3.6 DECOMMISSIONING WORK BREAKDOWN STRUCTURE AND PROJECT CONTROL

The project WBS and WBS Dictionary provide the project framework for definition, management, and control of the project, and show how the project fits together. The Project WBS is extended from the relatively generic Site CPB WBS level 5 and level 6 elements to include all of the building-specific activities required to disposition the building. The Project WBS **SHALL** be incorporated into the PEP. An overview of the budgetary flow process from the CPB to the WBS is shown below.



Every project has some level of a WBS included in the CPB. The K-H and Principal Subcontractor PMs **SHALL** ensure that:

- The WBS and WBS Dictionary be extended beyond the levels included in the Site-wide WBS.
- The WBS is provided to D&D Projects for review and approval. Any change to the existing Site WBS is approved through the Baseline Change Proposal (BCP) process.
- The WBS Dictionary identifies appropriate activity endpoints, or identifies when the appropriate endpoint will be defined (i.e. after which other project activity is completed).
- The WBS Dictionary includes other programs (including deactivation activities) which are occurring concurrently in the building, or explicitly describes the interfaces between activities of different programs.
- The project uses the facility disposition project schedule template and aligns the project(s) activities with the WBS. The WBS is required to standardize cost collection for facility transition projects.
- The project milestone, cost and schedule data tie to the project WBS.

The following Decommissioning WBS Dictionary **SHALL** be used for all facility disposition projects, unless granted an exception by D&D Projects. If a facility disposition project contains more than one building, then the WBS **SHALL** be able to separate scope and accrue costs for each separate building.

#### Decommissioning Work Breakdown Structure (WBS) Dictionary

##### **... 04.01 Planning and Engineering, Building XXX Decommissioning**

This element covers all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs associated with the Planning and Engineering for the decommissioning of Building XXX. The scope of this includes, but is not be limited to, activities: such as: the preparation of the PEP, DOP, PAM, IM/IRA, RCRA Unit Closure Description Document, Health and Safety Plan (HASp), IWCP, utility relocation design documents, building demolition design documents, equipment removal design documents, design engineering inspection, preparation of required procedures; the preparation and submittal of all permits.

##### **... 04.02 Characterization, Building XXX Decommissioning**

This element covers all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs associated with the characterization processes for the decommissioning of Building XXX. Under this Characterization WBS, costs are collected under the following "Sub-Categories (lower level WBS Elements):" Scoping, Reconnaissance, In-process, and the Pre-demolition Survey, which includes independent verification, if required, for the D&D Closure Project. This element does **not** cover the characterization associated with IHSS or UBC remediation, which is part of ER.



**Decommissioning Work Breakdown Structure (WBS) Dictionary**

**... 04.03 Site Preparation, Building XXX Decommissioning**

This element covers all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs associated with Site Preparation for the decommissioning of Building XXX. The scope of this element could include, but is not be limited to, activities such as; the establishment of lay down areas, shipping and material processing areas; set-up of size reduction, monitoring and waste staging areas, and step-off pads; and the removal of stored wastes.

**... 04.04 Decontamination, Building XXX Decommissioning**

This element covers all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs associated with Decontamination for the decommissioning of Building XXX. The scope of this element could include, but is not be limited to; the decontamination of building interior/exterior surfaces; and non-process equipment, drains, tanks, piping, ducting, etc. In addition, it includes the removal of hazardous and toxic substances; e.g., asbestos abatement, lead/lead based paint and PCB removals, etc. associated with the decommissioning effort.

**... 04.05 Dismantlement, Building XXX Decommissioning**

This element covers all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs associated with Dismantlement for the decommissioning of Building XXX. The scope of this element could include, but is not be limited to, activities such as; the decontamination, stripout, removal and size reduction, if required, of process equipment (gloveboxes, tanks, process piping, ducting, etc.), distributed systems (building lighting/power, heating, water, sewer, etc.), and isolation of the building/structure/etc. from the rest of the site infrastructure.

**... 04.06 Demolition and Disposal, Building XXX Decommissioning**

This element covers all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs associated with the Demolition and Disposal of clean construction rubble and debris for the decommissioning of Building XXX. The scope of this element could include, but is not be limited to, activities such as the demolition and disposal of the roof, non-structural and structural components, foundations (if applicable) and, connecting structures (tunnels, breezeways, overhead walkways, etc.) of the building/structure/etc undergoing demolition. This element also includes the packaging, pre-certification and movement to an identified pickup point; i.e., building loading dock, etc., of contaminated wastes generated during the overall decommissioning effort. Any additional movement, or treatment, storage and disposal (TSD) of contaminated (hazardous and/or radiological) materials, after they have been packaged and staged at the pickup point, for the types of hazardous and/or toxic wastes generated as a result of the overall decommissioning effort performed per the elements above, e.g., site preparation, characterization, decontamination, dismantlement (stripout), etc., are **not** included in this element. These waste disposal costs are the sole responsibility of WM.

*Pre-certification of waste materials is defined as that degree or amount of waste inspection and certification required, on the part of the specific D&D Project, to assure that there is a reasonable probability that the packaged wastes will not be returned to the project for additional work. Pre-certification does not involve the more sophisticated techniques of waste certification; such as, NDA, head space sampling, etc. These sophisticated certification techniques are the responsibility of Waste Management (WM).*

**Decommissioning Work Breakdown Structure (WBS) Dictionary**

**... 04.07 Project Management, Building XXX Decommissioning**

This element covers all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs associated with the Project Management efforts for the decommissioning of Building XXX. The scope of this element includes, but is not be limited to, activities such as: project management, construction management, oversight, project engineering, project administration, project controls and reporting, finance and accounting, training coordination, project records management and document control, etc.

**... 04.08 Support Services, Building XXX Decommissioning**

This element covers all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs associated with obtaining support services for the decommissioning of Building XXX. The scope of this element could include, but is not be limited to: support services such as: training, procurement and contract administration, security and fire protection, QA/QC, waste management and inspection, transportation and construction equipment, radiological operations and engineering, Radiation Control Technician (RCT) support, medical and health, safety and industrial hygiene, shipping/receiving and warehousing, legal, regulatory interface, laundry, small tools and personnel protective equipment (PPE), analytical laboratory, toxic and hazardous material handling, utilities, excess property, telecommunications and information resources, finance and administration, planning and integration and other support services yet to be identified.

The scope of work to accomplish facility disposition *may* be broken down into discrete worksets. Although there is no requirement to break the work into "worksets", it is recommended for facility disposition projects. These sets combine all required activities for completion of facility disposition. Segregation of the sets into deactivation and decommissioning categories provides for differentiation between regulatory requirements and the work flow process. All sets **Should** have specific endpoints or workset boundaries assigned that will define the phase of completion of the task.

Establishing specific requirements for project controls and reports ensures continuity, integration, and consistency in communicating and documenting the current status and progress of projects. Individual reporting requirements and control criteria are established and defined within the PEP on a graded approach by each project. Project controls and reports are intended to facilitate the following:

- Early identification of potentially damaging trends and occurrences.
- Minimization of management time necessary for detailed review.
- Uncomplicated presentation of relevant information.
- Clear representation of problem significance and required actions.
- Focus on relevant issues.
- Reasonable cost of data acquisition and reporting through the utilization of available project information supported by common commercial PC hardware and software.

All formal reports documented for facility disposition and construction projects **Should** include the following basic information: official project title as it appears on the authorizing document; project WBS identification number; report date that report information is based on; and, the date the report was printed. In addition to containing the above basic information and using a graded approach, facility disposition and construction project schedules **Should** clearly indicate all scheduled activities, forecasted completion of the scheduled activities, a "Time Now" line, and the critical path activities. As applicable, all project internal, performance measure, DOE, and

RFCA milestones that fall within the span of the schedule **Should** also be clearly indicated on the schedule.

The following project controls and reports are the minimum periodic reports that **SHALL** be required for facility disposition and construction projects. Additional reports *may* be required as determined by authorization, funding, project specific requirements, management needs, and good business practices. This would include, but not be limited to, variance reports, milestone status reports, safety statistics, corrective actions, subcontractor performance evaluations (see Appendix F-1), etc. All regular and project specific reports **Should** be identified in the PEP indicating, at a minimum, the report title, reporting frequency, and report primary distribution.

#### PROJECT CONTROLS AND REPORTS

##### Project Performance Report

A Project Performance Report (PPR) **SHALL** be prepared for active facility disposition and construction projects on a monthly basis by the K-H Project Manager. At a minimum, the PPR provides project specific information regarding the following items:

- Cost and schedule status/variances
- Status of the projects critical path activities
- Required corrective actions and their status
- Accomplishments/achievements
- Issues/concerns
- Status of performance measures
- Status of DOE and RFCA milestones
- 60-day look-ahead issues
- The project's Estimate At Completion (EAC).

##### Monthly Accrual Report

An Accrual Report **SHALL** be prepared on a monthly basis for active facility disposition and construction projects. Following review and approval by the K-H Project Manager the Accrual Report is submitted to K-H Accounting. This Accrual Report provides current information for development of the project's actual cost to date, as well as, the obligated or incurred costs.

##### Table of Values

The single most important factor in the calculation of performance variances (e.g., Schedule Variance (SV), Cost Variance (CV)) is the "Earned Value" or Budgeted Cost of Work Performed (BCWP). The K-H Project Manager **SHALL** prepare, as part of the PEP, a "Table of Values" for active facility disposition and construction projects. The Table of Values assigns a life cycle dollar value of budgeted cost of work scheduled (BCWS) to each scheduled activity. On a monthly basis, the K-H Project Manager determines the percent complete for each scheduled activity in the PEP. The period and year to date BCWP for the scheduled activity(s) is derived from this monthly determination of percent complete.

### 2.3.7 DEACTIVATION ACTIVITIES AND PROCESS

Deactivation activities remove the cluster of facilities from operation and prepare them for turnover for decommissioning or conversion/release to a new use meeting applicable safeguards, hazardous category or other completion criteria. Specific deactivation activities include: IWCP development, removal of hazardous and non-hazardous materials, SNM holdup removal and emptying storage areas to reduce fire loading. Activities *may* include inventory and removal of unattached hazardous materials from the facilities and immediate areas, such as hazardous chemicals, beryllium and gas cylinders. RCRA unit closures *may* be completed or

may be placed in a RCRA stable condition. An economic disposition determination is made for unneeded property.

Deactivation activities reduce the potential liability and risks posed by excess contaminated equipment, RCRA issues and general hazards. Deactivation also results in additional baseline cost reductions by eliminating or further reducing the surveillance and maintenance activities currently required. Other activities may include the shipping of materials and waste to further deactivation within these facilities. It also *may* include removal of contaminated tooling that is easily removed and removal of clean equipment, tanks and gloveboxes. The deactivation process is controlled by four elements: characterization; tenant endpoints; deactivation endpoints; and deactivation planning.

1. Characterization – Requirements for characterization of deactivation activities are satisfied by the ISM process used during the development of the IWCP package for the deactivation activities.
2. Tenant Endpoints – Tenant activities are those activities operating within a building that do not support the Landlord functions. An example of a tenant activity is the residue processing in the plutonium facilities or the computer facility in Building 881. In order to properly plan the facility disposition work, it is necessary to establish the end state for the tenant activities. The end state **SHALL** be formally agreed to by the landlord and tenant organizations. This agreement can be as simple as a memo documenting the agreement and should include the following elements:
  - Relocation of personnel
  - Removal of excess chemicals
  - SNM holdup disposition
  - Waste removal
  - Classified property/material disposition
  - Removal of liquids/oils from equipment
  - Government property disposition
  - Disposition of records
  - Removal of hazardous and non-hazardous materials
3. Deactivation Endpoints – Deactivation endpoints encompass the end state for deactivation and the start point for decommissioning. The endpoints specify when the deactivation project is complete. Deactivation end points are required for all facility disposition projects. The end points will allow the proper planning and estimating to ensure scope between deactivation and decommissioning is not missed or duplicated. These end points also define the change in regulatory structure. When decommissioning starts, the work falls under RFCA. Deactivation activities are not governed by RFCA.

End point development is an iterative process. Most end point decisions **should** be developed during the early planning stages. However, some will have to be modified as deactivation proceeds. The end points will contain the following minimum information:

- A brief description components (equipment, gloveboxes, piping, etc.) by room, system or by work sets.
- The components will be grouped by type (gloveboxes with lathes, gloveboxes with holdup, clean gloveboxes, etc.).
- An end state will be described for each component type. For example: glovebox with a lathe and SNM holdup – accessible holdup in the glovebox will be removed and packaged. The exterior surfaces of the lathe will be clean. The lathe will remain installed. Miscellaneous materials will be removed. The interior of the glovebox will

be wiped down. All hazardous materials will be removed. The lead will remain on the exterior of the glove box. Zone 1 ventilation to the glovebox will be operational. Oils will be removed from the lathe. All liquids will be removed from the box.

- Waste information (i.e. waste left, containers, etc.)

The end points can be documented in numerous ways. For detailed end points (such as a type 3 building), a separate document may be necessary. For less detailed end points (such as a type 2 building), they could be included in the PEP. For type 1 buildings, the type 1 facility checklist in Appendix B-1 will be sufficient. The end points document will be approved by the deactivation organization and the D&D program office.

4. Deactivation Planning – Deactivation planning is documented in a PEP.

### 2.3.8 Mothballing

There may be situations where there is no longer a mission for a building, and it is not planned for the building to be decommissioned for several years. When this occurs, it may be cost affective to "mothball" the facility. The term mothball is defined as placing a building in a condition where it is no longer actively occupied. Ventilation, heating and air conditioning, fire detection and protection systems may be turned off. Sump pumps to remove groundwater infiltration may be operating.

It will be necessary to conduct an economic analysis to determine that if the additional cost to conduct the activities necessary to meet the requirements for the building to be placed into mothball status is less than the savings from the reduction in landlord cost.

In accordance with the DPP, Section 3.3.4, A RLCR will be submitted to the LRA prior to "mothballing" or prior to beginning decommissioning. In addition, whenever DOE chooses to "mothball" a facility, DOE will submit a hazard analysis of the facility specific conditions for the mothballed period, meet with the LRA to discuss any potential hazards or releases to the environment which might occur during the mothball period, devise actions to mitigate potential releases in collaboration with the LRA and propose adequate monitoring methods to monitor any release. Any modification to work previously approved in a decision document would be processed in accordance with RFCA, Part 10, Changes to Work.

### 2.3.9 DECOMMISSIONING ACTIVITIES

Decommissioning may begin either in an entire building or a part of a building. In non-nuclear facilities, decommissioning *may* begin as soon as the building's mission is at an end. In some buildings, decommissioning *may* run concurrently with deactivation and/or operations or after deactivation and operation activities are completed. Some activities described in Phase II *may* occur either during the Deactivation or Decommissioning Phase.

The following list provides examples of decommissioning activities that help delineate the portion of the disposition continuum that is regulated as decommissioning under RFCA and covered by a Decision Document. (See Section 5 and Appendix D for details regarding Decision Documents) The sequence of execution of these activities is dependent upon project specific needs and requirements.

## DECOMMISSIONING ACTIVITIES

### EQUIPMENT DISMANTLEMENT

- Removal or size reduction of equipment, piping, ducts, hoods, gloveboxes, and major electrical components (e.g., strip out)
- Remove process vessels
- Remove glovebox off-gas and ventilation ducting legs
- Remove Zone I HVAC system, and ensure ambient air monitoring is in place
- Remove process pumps
- Collect and disposition remainder of files
- Removal of hot spots and hazardous substances

### DECONTAMINATION (FACILITY/ACTIVITY/EQUIPMENT)

- Characterization of hazards, contaminants, or process systems requiring decontamination and strip-out
- Decontamination in preparation for release for reuse or dismantlement
- Remove hazardous and radioactive contamination to minimize hazardous/radioactive material dispersion during demolition and minimize high cost waste
- Removal of radioactive hot spots and hazardous substances
- Remove non-load bearing walls to minimize high cost waste
- Waste minimization activities associated with decommissioning, e.g., segregation of sanitary and non-sanitary wastes
- Remove remaining asbestos, lead, mercury, etc.

### UTILITY SYSTEM SHUTDOWN

- Removal or size reduction of utility systems
- Isolate utility systems to the facility, e.g., steam, water, sewer, fire, diesel generators, UPS, and grounding/lightning protection, pressurized air, liquid effluent discharges, inert systems (N<sub>2</sub>, Ar), and O<sub>2</sub> analyzers
- Deactivate HVAC, criticality, and building chemical/gas support systems
- Remove remaining HEPA filters
- Remove/reconfigure electrical switch gear
- Remove remaining operational system that supported previous phases
- Remove accumulated waste and remaining office furniture

### FACILITY DEMOLITION

- Final radiological and non-radiological surveys of the physical structure(s), (e.g., Pre and Post Demolition Surveys)
- Demolishing the physical structure
- Monitor for releases during building demolition (*Note: This may also be done by ER*)
- Disposal of rubble/wastes

## 2.3.10 ENVIRONMENTAL RESTORATION (ER) ACTIVITIES

Decommissioning dependent ER activities should be integrated with the decommissioning effort to enhance cost effectiveness, schedule efficiency and health and safety. In buildings where under building contamination (UBC) exists, characterization of the UBC should begin in the deactivation phase or early during the decommissioning planning phases. It will be necessary to build activities into building schedules that will allow the ER organization to obtain UBC samples by boring through the floor and extracting soil cores.

Early in the planning stages, it will be necessary to determine how much of the underground structure will be removed during decommissioning and what will be removed by ER. In general, decommissioning will include the removal of the whole structure including slabs and footings down to three feet below grade. If contamination is found below the that area, a plan will be developed between the decommissioning and ER organizations as to when the other structural material will be removed.

Prior to the initiation of decommissioning activities, monitoring efforts (monitoring of surface water, groundwater, ecological, and air) are required to establish the baseline conditions. This effort is coordinated with the K-H Waste and Remediation Operations (WRO) and the ESS organizations. To establish good baseline conditions, this effort **Should** occur very early in the decommissioning scoping phase and **Shall** be incorporated into the Integrated Monitoring Plan (IMP) update.

Whenever possible, the subcontractor performing building decommissioning will perform the ER remediation. This strategy will reduce mobilization and demobilization time and costs, reduce procurement time, and streamline technical processes. The knowledge gained through decommissioning and lessons learned will contribute to accelerated remediation. The following list provides examples of environmental restoration or remediation activities.

#### **SITE REMEDIATION EXAMPLES**

- Monitor site for any environmental impacts
- Cap, cover, or otherwise stabilize building slab
- Core sampling of the building/facility for Environmental Restoration
- Removal of the building/facility to at least 3 feet below grade
- Disposition of Concrete and Soils

*Note: Core Sampling for establishing a baseline may need to be started prior to demolition.*

### **2.3.11 FACILITY TRANSITION AND LANDLORD ACTIVITIES**

As part of the facility disposition process, there **may** be a need to either transfer ownership within K-H of the facility or change the operational use of the facility, or both. Facility transition is a formal process that has been documented and institutionalized in Rocky Flats Closure Project Procedure, 1-PRO-209-RPTP, Real Property Transition Procedure (RPTP). This procedure provides specific requirements, instructions, guidance, and example checklists for conducting facility transition.

The transition process requires the selection of a Facility Transition Team Manager and Facility Transition Team. The Team ensures that the required transition process is effectively and efficiently completed in accordance with the RPTP, including verification that sufficient documentation and checklist items have been completed, reviewed, and approved by all responsible parties prior to final turnover of the facility. The Facility Team Manager **SHALL** notify the DOE project coordinator early in the transition process to ensure that DOE can also transition the facility to the appropriate DOE organization.

The following are some of the major activities that are conducted as part of the transition effort. For Type 1 Facilities, the Type 1 Facility Checklist is completed (See Appendix B-1).

- Conduct initial facility walk-through
- Perform comprehensive facility inventory (e.g., operations, records, radiological issues, chemical hazards, etc.)
- Transfer accountable inventory (if applicable)
- Complete transition checklists
- Conduct turnover walk-through
- Resolve conflicts
- Document facility status (limitations, strengths, and deficiencies)
- Notify affected parties of the transfer
- Transfer of Life Cycle Funds via the BCP process or another approved transfer method.
- Maintain and disposition all records in accordance current Records Management Guidelines.

*NOTE: All efforts **Should** be made to coordinate these activities with the facility disposition Project Team so that efficiencies can be gained and duplication of characterization activities do not occur.*

For facilities anticipated to be, or initially listed in Appendix B-1 as a Type 1 Facility, the current Landlords **SHALL** determine if any of the following conditions exist, or are expected to occur:

- The facility is expected to be transferred to another department, or
- The facility is currently unoccupied by personnel, or
- The facility is expected to become unoccupied for a period longer than 3 months with no new mission identified.

*NOTE: For Type 2 and 3 facilities, use the PEP to define transition strategies.*

If any of the above conditions exist, then the current landlord **SHALL** complete the following items **PRIOR** to transitioning the facility to the new Landlord.

1. Conduct a Walkdown of the facility and complete the Type 1 Facility Checklist (Appendix B-1).
2. Review the Type 1 Facility Disposition Checklist with the D&D Program Office.
3. Produce the initial PEP for the facility. It is expected that this PEP will be substantially graded and **SHALL** contain the following sections as a minimum:
  - Type 1 Facility Checklist (Appendix B-1)
  - A brief description of the facility walkdown
  - A description of any hazards identified, controls necessary for those hazards and a brief plan to remove those hazards.
  - A budget for completing these activities.
  - A schedule showing the timing for these activities and indicating when decommissioning is expected to begin.
  - A discussion of the regulatory compliance status and any unusual or distinctive regulatory issues associated with the facility.
4. Submit the Type 1 Facility Checklist and the PEP to the D&D Program Office for review and approval
5. Perform activities in accordance with the approved PEP.



*Note: Completion of the checklist ensures that the new Landlord is provided with sufficient knowledge about the current conditions of the facility prior to transition. It also ensures that the facility is placed in a safe condition, including establishing monitoring and/or surveillance requirements as appropriate, in readiness for Decommissioning at a later date. Once the Project/Facility is funded for decommissioning, the Project is expected to be planned and executed in accordance with the requirements of this Manual.*

### 3.0 PROJECT INITIATION AND SCOPING

The purpose of this chapter is to present the requirements and guidance for performing activities in the project initiation and scoping phase of the project. The objective of this phase is to initiate the project and to get agreement on a defined scope of work for the project from DOE and the LRA.

#### 3.1 OVERVIEW

Scoping refers to the process of defining or providing a comprehensive description of the project to be performed. The scope of work refers to the project or activity baseline that defines technical objectives and general approaches in terms of design, execution, and performance requirements, criteria, and characteristics derived from what the project is intended to accomplish.

Project initiation and scoping is the first step in the facility disposition process. The key steps in this phase involve initiating the project, establishing the project team and records system, conducting the scoping characterization, defining the project scope, preparing or updating the PEP, and conducting the joint scoping meeting. The expected end result of this phase is to get agreement from DOE and the LRA regarding the defined scope of work for the project.

The first part of the scoping phase involves several activities related to project initiation. These activities include updating the CPB budget; identifying the K-H project manager; preparing the Basis of Estimate (BEST) inputs, PBDs, and FY work plans; completing the Activity Screening Form (ASF) and initiating the required Work Control Forms (WCFs); and identifying the principal subcontractor project manager.

Once the Scoping Phase is initiated, the PM **SHALL** use the Scoping checklist to track the completion of the requirements outlined in this section. The Scoping checklist **SHALL** be completed and signed by the PM and the D&D Division Manager prior to initiating Phase I planning. The Scoping checklist is located at the end of this Section.

#### 3.2 PROCESS LOGIC FLOW

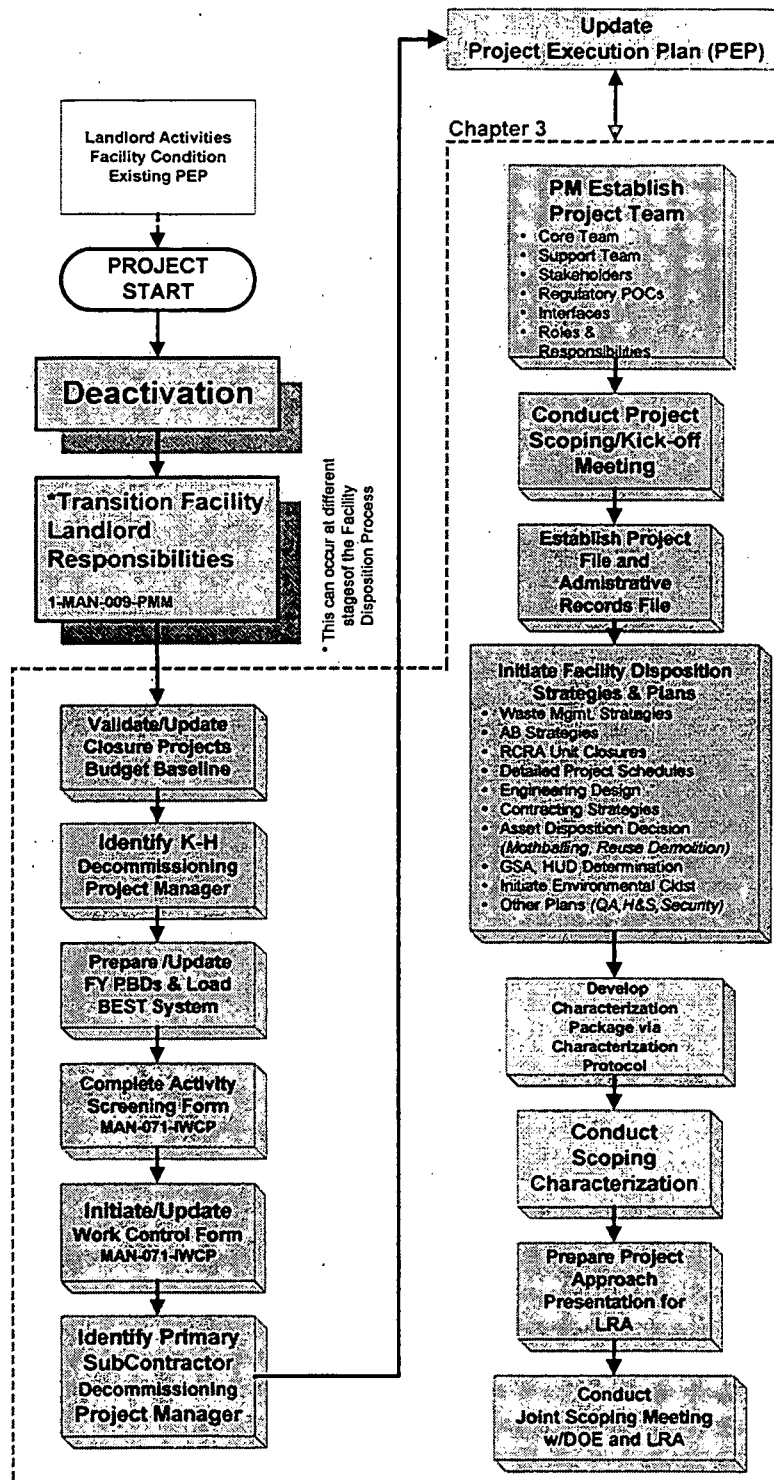
The activities involved in the project initiation and scoping phase are shown in the process logic flow diagram (Figure 3-1). The project initiation activities, shown in the left column, flow sequentially from top to bottom. However, some of these activities can actually be performed in parallel. During this phase the PEP is prepared or updated, and the scoping characterization is completed. The second column in the process flow diagram shows the activities leading to the joint scoping meeting, where agreement is reached on the defined scope of work for the project.

#### 3.3 REQUIREMENTS

##### 3.3.1 Project Initiation

Project initiation requires that the Project Manager is identified and the necessary paperwork is prepared to ensure that adequate funding and tracking of that funding is available. The following sections provide additional information with respect to project initiation.

Figure 3-1  
PROJECT INITIATION AND SCOPING  
PROCESS FLOW DIAGRAM



### 3.3.1.1 Identify K-H Project Manager

The applicable Vice President responsible for the facility disposition project appoints the K-H Project Manager.

### 3.3.1.2 Update CPB and Prepare FY Work Plan (PBDs and BEST Input)

If necessary, the CPB is updated in this phase. Based on the CPB, the K-H PM prepares/updates the project baseline documents and loads the data into the BEST system. Using this information along with the budget call guidance and other applicable documents, the FY work plan is updated for each year of the project.

### 3.3.1.3 Complete ASF and WCFs

The K-H PM or designee completes the ASF for the project to determine the level of planning required in accordance with the IWCP Manual, MAN-071-IWCP. In addition, the ASF will assist the PM in determining the types of safety and environmental discipline SMEs that are needed for the project team. The ASF is completed based on the scope and project definition provided in the FY work plan with assistance from select SMEs, as required. The level of planning required is based on the hazards, uncertainty, experience, and complexity of the work to be performed. It is not appropriate for every specific activity in the project to be screened using the ASF. Therefore, the following guidance is provided regarding the definition of a project and an activity to determine when the ASF is applied.

A project is defined as a specific plan or design that consists of several major tasks/activities to be completed, e.g., D&D Building 779. An activity is defined as an individual unit of work for performing a specific function, e.g., place excess equipment in storage container, decontaminate a glovebox. The ASF is applied primarily at the project level, as depicted in figure below. This will ensure that an appropriate level of planning is applied to the entire project. In some cases, it *may* be necessary to apply the ASF at the Major Task/Activity level. However, this is necessary only when the activity is a stand-alone activity and not associated with a mission/project, e.g., a major repair to a failed piece of equipment. Figure 3-2 provides a visual representation of the various levels of activities that typically exist within a project.

The K-H PM completes a WCF for the project and additional WCFs for the major tasks or activities that require individual or separate planning teams, as shown on the figure below.

### 3.3.1.4 Identify Principal Subcontractor Project Manager

The K-H Contractor Technical Representative (CTR) for the facility disposition project provides concurrence on the principal subcontractor project manager selected for the facility disposition project.

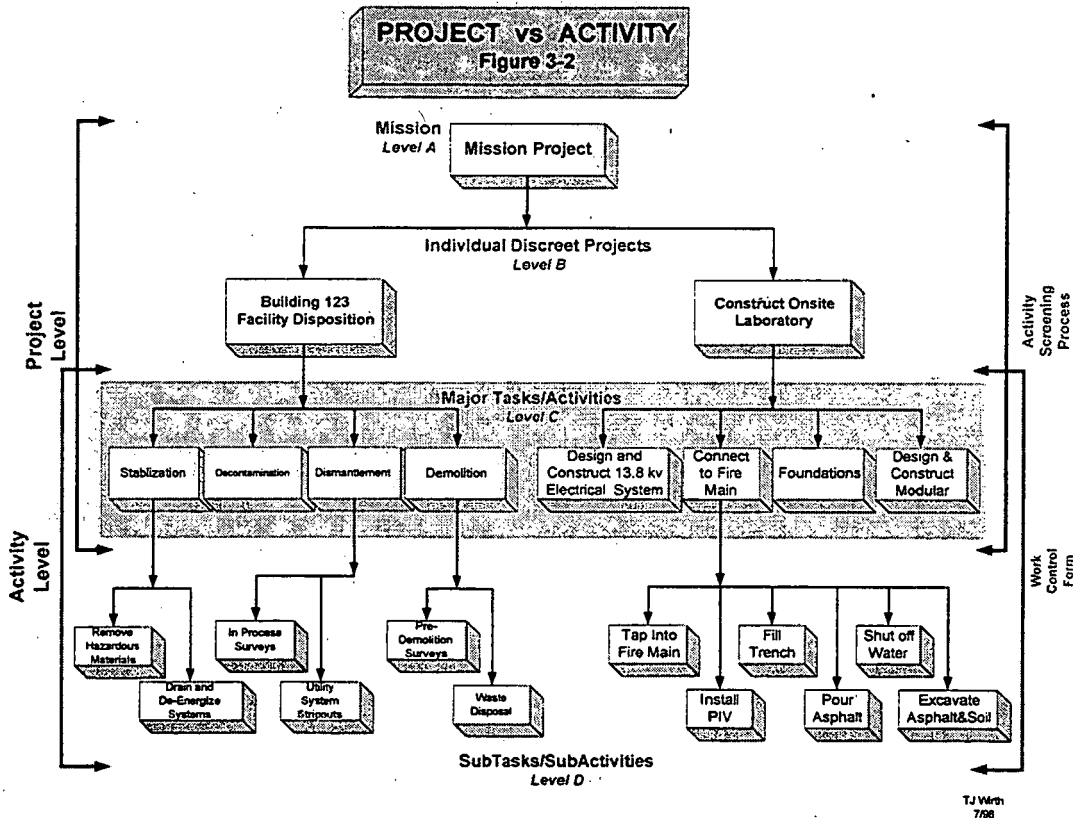
## 3.3.2 Project Scoping

Project scoping involves preparing and updating the PEP and establishing the project team. The following sections provide additional detail on project scoping activities.

### 3.3.2.1 Prepare/Update PEP

Based on the information and results from the other activities performed in this phase, the K-H PM **SHALL** prepare the PEP for the defined scope of work of this project. If the PEP already

exists, or has already been prepared for the deactivation tasks prior to decommissioning, the K-H PM **SHALL** update the PEP in this phase to reflect the facility disposition tasks. The PEP template in Appendix C-1 provides guidance regarding the specific information that **Should** be included in the PEP.



### 3.3.2.2 Establish the Project Team

The K-H and principal subcontractor PMs **SHALL** establish the project team, which consists of a core team and a support team(s). The team members and organizations are explicitly listed with names, titles, and responsibilities for the project or a specific phase or phases. Contractual relationships and the reporting and work package/cost account authorities and responsibilities are also specified. The core team consists of the PM and several key members who are expected to participate in all aspects of the project planning and execution. The support team or teams consist of the work planners, engineers, and safety discipline SMEs planning specific parts of the projects (e.g., major tasks/activities).

The makeup of the core team and the project planning/support team(s) is dependent upon the project scope, the hazards expected to be encountered during the performance of the work, the uncertainty of the project/activity scope and hazards, and the complexity of the project/activity. The previously completed ASF provides the PM with a first cut of the SMEs that **Should** be considered while establishing the planning team(s). The core team **Should** solicit involvement of the support team as early as possible in the project, especially in the initial project meetings. Typical and representative (but not all inclusive) team members for the core team and the support team are shown below.

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**Typical Core Team Members**

- K-H PM
- Principal Subcontractor PM
- QA/QC
- Construction Management (lead)
- Facility Manager (or representative)
- Facility Operations (lead)
- Cost Estimator/Project Cost Analyst
- Safety Analyst (lead)
- Administrative Support
- Environmental Compliance Project Manager
- Waste Management

**Typical Support Team Members**

- Engineering/Engineering Support
- Crafts (Hourly Workers)
- Safeguards and Security
- Emergency Preparedness/Management
- Nuclear/Criticality Safety
- Project Engineer (lead)
- General Counsel (legal)
- Operations Support
- Environmental Restoration
- Radiological & IHS Specialists
- Procurement
- Transportation
- ESS (SME for multi-media environmental compliance)

It is important to note that as the facility moves through its planning and execution phases membership of the team **may** vary with the needs of the project. However, in order to ensure continuity and efficiency of the project, the core team **Should** be identified and assigned for the duration of the project.

In any given project, there **may** be more than one team necessary to plan the work. Figure 3-3 provides an overview of the various types of teams that **may** be established to ensure all the work associated with the project/activity is adequately anticipated and ready to be performed.

**3.3.2.2.1 Team Member Roles and Responsibilities**

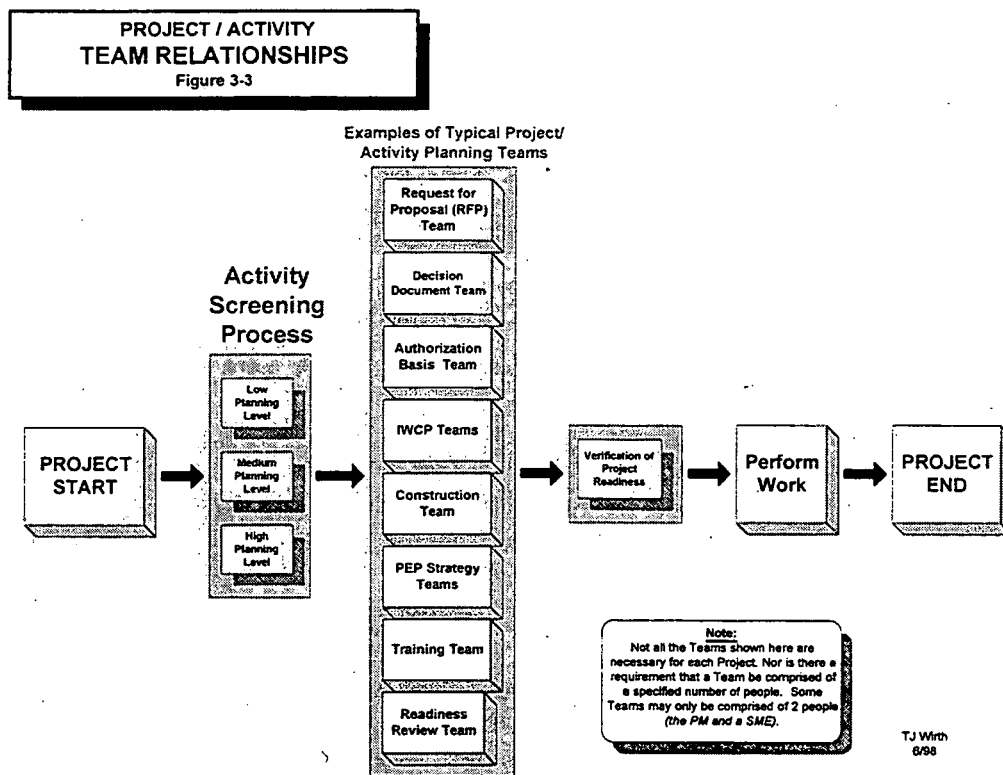
The K-H PM is responsible for project budgeting, funding authorization, and project oversight. The specific contractual responsibilities of the K-H and Principal Subcontractor PMs will be identified in the appropriate documents. The K-H PMs is the single point of contact for K-H organization interface with the project.

Some projects require multiple teams for specific or unique activities. In those cases where multiple teams are required, single points of contact **Should** be identified as interface points between teams to disseminate information and to establish team hierarchy.

The K-H PM, supported by the core team, identifies, documents, and resolves organizational turnover issues relating to project responsibilities for a facility. The project team coordinates with the facility transition team if the transition occurs during the facility transition project in accordance with the RPTP. The facility transition acceptance checklist prepared by the facility transition team is reviewed by the project team. Any administrative or AB changes for turnover to the project team are identified by the K-H PM (see Section 2, Section 2.5 Facility Transition). For each established team, the teams roles and responsibilities **Should** be identified and documented to include the following:

**TEAM MEMBER ROLES AND RESPONSIBILITIES**

- Identification of stakeholders
- Agreement on working schedules
- Selection of team members for all aspects of the activity
- Priority of maintaining team continuity and minimizing team member turnover
- Identification of training requirements/qualifications
- Identify specific roles and responsibilities for each team member
- Identify part-time SMEs for areas with weak coverage by full-time team members



#### 3.3.2.2.2 Team Member Qualifications

Team members **Should** have a combination of individual and collective experience and education to provide adequate expertise about the project/activity under consideration. The team can include members from the primary and principal subcontractors, including floor-level workers and SMEs where appropriate, and where such inclusion is required, to reach quality decisions about safety and hazard controls.

The members of the project teams **Should** be qualified and empowered by the organization which they represent to provide prompt response and input in technical and policy areas related to that organization's responsibilities. Upon completion of the process, the team membership, deliberations, and decisions are documented and included in the project/activity document files. Instructions for completing the Team Credentials Report are provided in the IWCP, Activity Screening Process.

#### 3.3.2.2.3 Regulatory Interface

The DOE, CDPHE, EPA, and DNFSB **Should** have identified points of contact, and will typically have an "observer" status within the project team. They **Should** be contacted and invited to routine project meetings. The LRA project point of contact should be consulted to determine which types of meetings they are interested in attending.

The project team **SHALL** interface with the K-H D&D Program Office to identify regulator issues and develop regulatory strategy. The K-H D&D Program Office **SHALL** interface with the RFCA Project Coordinator to facilitate resolution of regulatory issues. The DOE project point of contact is the single point of contact with the regulatory agencies; however, the K-H PM will

typically have significant communication with the regulators. It is important that the DOE project point of contact be kept aware of all significant communications between the K-H PM and regulators. The K-H PM is responsible for following the Site policy in the preparation of contact records.

### 3.3.3 Initial Project Kickoff Meeting

The project team **Should** address and discuss the following items at the initial project kickoff meeting. Some of these issues **may** not be applicable to all projects.

#### **PROPOSED PROJECT KICKOFF MEETING AGENDA ITEMS AND ISSUES**

- Scope of project (WBS, endpoints, milestones, interfaces, uncertainties, key strategies)
- Project organization (chart, responsibilities, and Site and regulatory interfaces)
- Facility transition status (if needed)
- Facility characterization status.
- Potential deviations from the Site baseline identified to date.
- Status of budget and relevant BCPs for planning and execution.
- The acceptance checklist and any administrative or AB changes for turnover.
- Deactivation or other to be performed outside the scope of RFCA occurring within the same building.
- Functions or equipment moving or vacating the building, and any timing or schedule implications.
- Initial key requirements, and how final requirement sets will be identified.
- Significant uncertainties that currently exist that could affect the performance of the project/activity (including project/activity characterization information).
- Initial decision document strategy. This **may** include facility type; initial waste management strategy; initial contractual approach; initial equipment disposition strategy; and other initial approaches for key activities. This item **Should** include responsibilities of individuals in this process, and regulatory interfaces.
  - Unique or different strategies to be considered by the project.
- Potential project performance criteria, types of performance measures, milestones, and critical decision points.
- Records management
- Meeting minutes **SHALL** be taken and distributed to applicable organizations and any issues evaluated or analyzed and identified as action items.
- Schedule milestones/performance measures

### 3.3.4 Establish Records Management/Configuration Control System

The establishment of project files, record management, and configuration control methods **Should** be initiated early in the project. They are maintained and followed throughout the project in accordance with the PEP and the Site QAP. These files and methods support regulatory compliance, project management and control, legal and DOE Order Compliance, communication, product quality, and verification of successful completion. Project closeout includes closeout of project files and disposition of records and files. Appendix A-1 provides a standardized file index and records completion checklist for all D&D projects.

The project team establishes a project configuration control and document management process, as described below. The project team develops a project document hierarchy to assist in the planning process. The Project Deliverables Matrix, Appendix A-2, **SHALL** be used to



establish what documents are needed for project files, controlled documents, and administrative records. The Project Deliverables Matrix (Appendix A-2) identifies:

1. The phase of planning in which the item **Should** be initiated
2. Whether it's a project milestone
3. The type of document or record it is, e.g., controlled, AR, or project
4. The implementing procedure and driver document, e.g., RFCA, DPP, and DOE Order

It is important to note that many items on the list are developed simultaneously. Additionally, many have similar or identical information in the body of the document. All documents **Should** be consist, accurate, and minimize duplicative information. The D&D Advanced Planning Manager will provide a trained technical writer to assist the project team in the development of the documents. Work Control Documents **Should** be minimized to aid the Project Team in providing training, placement on Plan-of-the-Day (POD) and execution of work.

The Project Team establishes the necessary and appropriate items listed on the Project Deliverables Matrix (Appendix A-2), and the Document Review/Approval Matrix (Appendix A-3) is completed prior to execution. The K-H PM documents concurrence with this list. This ensures that all necessary planning elements and work control documents are in place for the specific scope of work prior to execution.

#### **DOCUMENT MANAGEMENT PROCESSES**

##### **Administrative Record**

Identify documents, which are retained and provided as part of the formal project-specific administrative record file in accordance with Section 4.4 of the RFCA Implementation Guidance Document and 1-F78-ER-ARP-001, CERCLA Administrative Records Program.

##### **Project Files**

Official and permanent files are established and maintained by the K-H Project Manager. The project files **will** be properly identified, protected, transmitted, distributed, retained, retrieved, maintained, and dispositioned based on the requirements established in the PEP and consistent with 1-V41-RM-001, Records Management Guidance for Records Sources. Engineering documents are controlled in accordance with Site Engineering Requirements Manual (SERM).

##### **Meeting Minutes/Contact Records**

Establish an approach for development and distribution of meeting minutes. This approach **Should** include standard distribution lists and formats. Formal correspondence **SHALL** be maintained in accordance with 1-11000-ADM-003, Correspondence Control Program. Meeting minutes with the regulators (LRA) are documented in the AR file.

##### **Document Development and Review**

Project document development and review is to conform to the Site Document Requirements Manual (SDRM).

##### **Project Controls and Reports**

Project controls and reports are documented in accordance with the requirements established in the PEP (see Section 2.3.4).

##### **Other Document Control**

Project QA requirements are established based on a graded approach. Analytical data quality, program data quality, and NQA-1 elements **Should** be considered and developed as necessary.

## SECTION 3 – PROJECT INITIATION AND SCOPING

**3.3.5 Develop WBS/ WBS Dictionary**

A critical activity early in the Scoping process is the development of the WBS and WBS Dictionary for the project. The WBS is the framework on which the estimating and schedule data are organized. It **Should** be developed to an initial level which provides detailed identification of the scope of activities within the Scoping and Phase I Planning phases, and sufficient detail for the Phase II Planning and Execution efforts to support rough-order-of-magnitude cost and schedule estimates. The cost coding structure **Should** also be developed at this time, consistent with the WBS. The WBS and project control requirements for decommissioning are discussed in detail in Section 2.3.4

**3.3.6 Scoping-Level Characterization**

Scoping-level characterization effort is intended to provide a general idea of the work and facility condition, the general types of hazards involved, the issues, holes in the data, and the needs for subsequent characterization activities. The scoping characterization activities provide input into the PEP and the RLC. An overview of the entire characterization process for facility disposition projects, and how scoping fits into that process, is discussed in Section 2. Guidance for implementation of the scoping characterization requirements is provided in DDCP.

**3.3.6.1 Develop Characterization Plan**

The project team **Should** develop a characterization plan for all the activities related to the scoping-level characterization task. This plan **Should** include a list of specific characterization activities and checklists, responsible individual(s), and a due date. Any specific formats, if required, for work products **Should** be specifically included in the plan.

**3.3.6.2 Historical Records Search and Data Compilation**

The project team **Should** perform searches, interviews, and data gathering based on a planned approach that ensures consistency of effort. The project **Should** use checklists developed in conjunction with the characterization plan. The focus of this activity **Should** be the identification of historical activities occurring in the facility, history of abnormal events (e.g., spills and accidents), the facility condition, the facility hazards, and significant uncertainties, which will require further characterization. The project team **Should** attempt to establish initial or presumptive levels, types, and locations of contamination based on historical and current documentation.

Information learned from this characterization activity will provide references, contacts, and interfaces for future characterization activities regarding information sources and types of information expected to be available.

**3.3.6.3 Facility Characterization Checklists (for walkdowns)**

Based on the characterization plan, the historical records search, and an understanding of facility risk, system functionality and degradation, and landlord issues; the project team **Should** develop a facility scoping characterization checklist to ensure the facility walkdowns are productive. An example of items to be considered for the walkdown checklist is provided below.

**EXAMPLE SCOPING CHARACTERIZATION WALKDOWN**

**Preparation**

- Review of engineering drawings: layout, structural, mechanical/HVAC, process
- Estimate data for glovebox volume
- Interviews and discussions of past operations, spills, incidents
- Review of operational radiological surveys
- Expected list of contaminants, hazards, OSHA and IH issues (by room or sets)
- Expected removal approaches
- Organization of work elements
- Prepare specific checklist
- Identification of rooms/areas to be inspected
- Review of AB and identification of safety systems impacting turnover, immediate work, and to be evaluated for adequacy to perform
- Identification and procurement of necessary Radiological Work Permits (RWPs), other safety preparation
- Identification of RCRA Units or areas/items with permit considerations
- Disciplines/individuals required; photography, video, or other data gathering

**Walkdown**

- Identify excess equipment and materials for transfer to PU&D
- Condition of equipment
- Arrangement, discoloration, painting, or deterioration indicative of contamination spills
- Location of equipment, access, congestion, height, etc. which will require specialized equipment or scaffolding, and increase work difficulty
- Consistency of measurements or data with actual conditions; equipment not shown on drawings (or shown and absent); walls changed, etc.
- Ventilation considerations
- Identification of potential sample locations, areas
- Legacy waste, orphan/excess equipment, trash, etc.

**Post-Walkdown**

- Comparison of data and identification of discrepancies
- Description of layouts and identification of issues
- Preliminary sample area identification
- Develop and issue walkdown report

**3.3.6.4 Facility Walkdowns**

The project team **Should** include the appropriate personnel on the walkdowns to ensure completion of checklist items and to assist in identifying additional issues based on observations and the facility condition.

Using the checklists previously developed, the project team's assessment **Should** include, at a minimum, the following issues: radiological conditions; waste chemicals; RCRA unit status; stored waste; idle equipment status; project logistics issues (staging areas, waste staging, etc.); potential impacts to surface water, ground water, and ecology (e.g., birds nesting); potential release of radionuclides to air; and presence of any other hazardous material or condition.

During this walkdown, the project team **Should** identify and document the general types and locations of the key facility hazards.

### 3.3.6.5 Summary of Results

The project team **Should** develop a written summary of the facility characterization activities as a result of the facility walkdown. The purpose of the summary is to prepare for the joint scoping meeting and provide a document as a starting point for further characterization. This summary **Should** include the following:

- Facility condition
- Operational historical
- System functionality
- Stored Waste, RCRA Unit, Idle Equipment status, and Tank Management
- Preliminary hazards identification (radiological, chemical, industrial)
- Individual Hazardous Substance Sites (IHSSs) or other areas identified as potentially contaminated that are associated with the project (i.e. UBCs, PACs, etc.)
- Environmental interfaces or issues other than IHSS locations
- Status of past/current hazards reduction activities
- Expected future hazards reduction before decommissioning begins

The project team **Should** include in the summary any key issues which must be addressed in the RLC activities during Phase 1 Planning. This **SHALL** include initiating the DQO process.

### 3.3.7 Joint Scoping Meeting

Upon completion of the Project Team's initial kick-off/scoping session, the DOE project point of contact **SHALL** be notified that the external scoping meeting should be scheduled. A presentation outlining the scope of the project will be presented for discussion and consultation with DOE and the LRA in the Joint Scoping Meeting. The purpose of the Joint Scoping Meeting is to coordinate RFCA and other requirements (e.g., Integrated Monitoring Plan, DNFSB, special projects, etc.), attain agreement on the project scope (action) and the type and content of the decision document. Joint Scoping Meeting invitees typically include: K-H and its principle subcontractors, EPA, CDPHE, and as appropriate, the DNFSB.

*Note: The LRA may choose to invite other regulatory agencies, as needed, to support the joint scoping session.*

The scoping issues/items listed in the table below are representative of the topics for discussion in the joint scoping meeting. The level of detail and determination of scope for this meeting **Should** be graded to the project and the facility type. Therefore, not all of these issues/items apply to every scoping meeting. Examples of representative issues/items for the joint scoping meeting are shown below, divided into two groups: informational and consultative.

### EXAMPLE/REPRESENTATIVE JOINT SCOPING MEETING ISSUES/ITEMS

#### Informational

- The purpose of the project/activity or work (objective and principal driver; why the project/activity is being performed).
- Project organization (chart, responsibilities, and Site and regulatory interfaces)
- History of the building operations.
- Record management and configuration control systems established.
- WBS extended to an appropriate level.
- Strategies for isolating utilities, processes, & systems for safe shut down.
- Strategies for Nuclear Safety AB.
- Identification of additional resources that *may* be needed for the activity/project.
- Initiate Environmental Checklist (Waste, Water, Air, NEPA, Ecological, potential ARARs, etc.).
- The type of project/activity or work being performed (i.e. deactivation and decommissioning, demolition, environmental restoration).
- Input identified for the RLC.
- Significant uncertainties that currently exist that could affect the performance of the project/activity (including project/activity characterization information).
- Project and regulatory interfaces (e.g., this project/activity could have interfaces with other activities in the same location).
- A description of the major work steps, phases, or elements.
- Scope of project (WBS, endpoints, milestones, uncertainties, key strategies)
- Initial levels, types, and locations of contamination based on historical and current documentation.
- Principal types of hazards directly involved with project/activity or expected to be encountered during performance of project/activity (keeping this assessment at a high level).
- Strategies for decontamination, deactivation of equipment and processes.
- Volumes, types, and methods for handling the various types of wastes encountered and/or generated (i.e. waste management strategies).

#### Consultative

- The starting and end points for the project/activity (project/activity boundaries).
- Permitting strategies (e.g., RCRA, etc.).
- Proposed facility type.
- Proposed Decision Document required: Type (i.e., PAM, DOP, IM/IRA, RSOP), content, and public comment period.
- Initial performance standards and potential ARARs
- Identification of regulatory authorities & decision-makers (RFCA, EPA, CDPHE, DOE, etc.).
- Schedule for regulator review periods

#### 3.3.7.1 Prepare for Joint Scoping Meeting

Upon completion of the project scoping activities in this phase, a presentation, outlining the applicable issues/items **Should** be prepared for the Joint Scoping Meeting with DOE and the LRA. The project team supports the K-H and Principal Subcontractor PMs in the development of the presentation that covers the informational and consultative issues/items previously discussed.

Before the Joint Scoping Meeting can occur, the D&D Division Manager, **SHALL** determine that the level of project development is adequate, that the facility hazards are sufficiently well understood, and that the all of the applicable scoping issues/items are adequately addressed.

### 3.3.7.2 Conduct Joint Scoping Meeting

The LRA, DOE, and selected members from the project team (lead by the K-H and Principal Subcontractor PMs) **SHALL** conduct the Joint Scoping Meeting. The K-H and principal Subcontractor PMs, in coordination with DOE, **SHALL** make a presentation of the issues/items prepared in the previous task. The consultative issues/items **Should** be presented as items open for discussion at the meeting.

As an elaboration to the consultative issues/items listed in the table above, the project team **SHALL** be prepared to discuss the following three key issues during the Joint Scoping Meeting:

- Environmental strategy – This is a discussion of the various environmental and ecology requirements and potential impacts, protection and the necessary path forward. Included in this discussion will be a review of RCRA Closures, regulatory and permit requirements, monitoring issues and other potential environmental concerns.
- Identification of requirements that would be waived under the CERCLA process and justification of how the substantive elements (i.e. standards, requirements, criteria, and limitations) would be met. This information would be formalized in the decision document, if applicable. The following are examples of what **Should** be considered: waste storage, general stormwater permit for construction activities, RAD/NESHAP, wastewater handling vis-à-vis then-available treatment facilities, and impacts of project stormwater runoff.
- The initial, proposed list of potential ARARs, including highlighting of specific differences from other D&D projects. The listing of potential ARARs identified in the RFCA Implementation Guidance Document, Appendix K, **Should** be consulted.

Meeting minutes **SHALL** be taken and distributed to applicable organizations and be placed in the AR file by the K-H PM. Any key issues to be evaluated or analyzed will be identified as action items in the meeting minutes. Action items from the meeting **SHALL** be formally dispositioned.

SCOPING CHECKLIST			
Project:	Project Manager:		
Activity	Exemption from D&D Division Manager	Date Completed	Signature
1. Validate and update closure projects budget baseline. (FDPM, 3.3.1.2)			
2. Prepare and/or update fiscal year PBDs and load BEST system. (FDPM, 3.3.1.2)			
3. Complete activity screening form, MAN-071-IWCP. (FDPM, 3.3.1.3)			
4. Initiate and/or update work control form, MAN-071-IWCP. (FDPM, 3.3.1.3)			
5. Identify primary subcontractor and obtain K-H CTR concurrence on principal subcontractor PM. (FDPM, 3.3.1.4)			
6. Establish project team, both core and support team members. (FDPM, 3.3.2.2) Attach a copy of the project team contact list to checklist			
7. Identify single points of contact as interface points between groups to disseminate information. (FDPM, 3.3.2.2.1)			
8. Identify and document team roles and responsibilities. (FDPM, 3.3.2.2.1)			
9. Prepare or update PEP in accordance with the guidance in Appendix C-1 of the FDPM. (FDPM, 3.3.2.1)			
10. Identify DOE, CDPHE, EPA, and DNFSB points of contact for the project. (FDPM, 3.3.2.2.3) Attach a copy of the project team contact list to checklist			
11. Identify regulator issues and develop regulatory strategy with DD Program Office. (FDPM, 3.3.2.2.3)			
12. Conduct project scoping and kick-off meeting. (FDPM, 3.3.3)			
13. Establish project file and administrative record. (FDPM, 3.3.4) Attach a copy of the proposed project deliverables matrix, project file index, and document review/approval matrix			
14. Identify the project technical writer. (FDPM, 3.3.4)			
15. Develop WBS and WBS dictionary. (FDPM, 3.3.5)			
16. Develop scoping characterization package in accordance with D&D Characterization Protocol. (FDPM, 3.3.6) <ul style="list-style-type: none"><li>◦ Was a plan developed?</li><li>• Were historical records search and data compiled?</li><li>◦ Were facility characterization checklists used?</li><li>◦ Was a facility walkdown conducted?</li></ul>			
17. Develop a written summary of the facility characterization activities. (FDPM, 3.3.6.5)			
18. Develop initial project approach and prepare presentation outlining the scope of the project. (FDPM, 3.3.7.1)			
19. Submit presentation to D&D Program Office for a determination if the project development is adequate. (FDPM, 3.3.7.1).			
20. Participate in joint scoping meeting. (FDPM, 3.3.7.2)			

SCOPING CHECKLIST			
Project:		Project Manager:	
Activity	Exemption from D&D Division Manager	Date Completed	Signature
21. Take and distribute joint scoping meeting minutes to applicable organizations and place in AR file. (FDPM, 3.3.7.2)			
22. Formally disposition action items from the joint scoping meeting. (FDPM, 3.3.7.2)			

Checklist Complete:

\_\_\_\_\_  
Kaiser-Hill Project Manager (print/sign)

\_\_\_\_\_  
Date

Approval to proceed to Project Close-out:

\_\_\_\_\_  
Kaiser-Hill D&D Division Manager (print/sign)

\_\_\_\_\_  
Date



## 4.0 PHASE I PLANNING

The purpose of this chapter is to present the requirements and guidance for performing the Phase I Planning activities of the project. The objective of this phase is to confirm the facility type and continue the facility characterization process through the RLCR; and to update the PEP with expanded scope details based on the additional characterization, engineering studies, and engineering assessments.

### 4.1 OVERVIEW

This chapter defines the requirements for facility characterization that ultimately lead to the preparation of a RLCR. Prior to this planning phase, the project scope in the PEP has been defined and the joint scoping meeting has been conducted. At the completion of Phase I Planning, the project has LRA concurrence of facility type, adequate information to support the development of engineering design packages has been developed, and a reasonable certainty of the scope and methods to accomplish the project have been defined in the updated PEP.

One of the planning activities in this phase includes establishing the method of accomplishing the scope and evaluating project decisions necessary to develop DQOs. Further feasibility studies are performed to validate these methods in parallel with the RLC. At completion of the RLC, and in parallel with developing the RLCR, additional field data will be factored into the work planning through engineering studies/assessments and feasibility studies to establish the baseline scope and approach for the project.

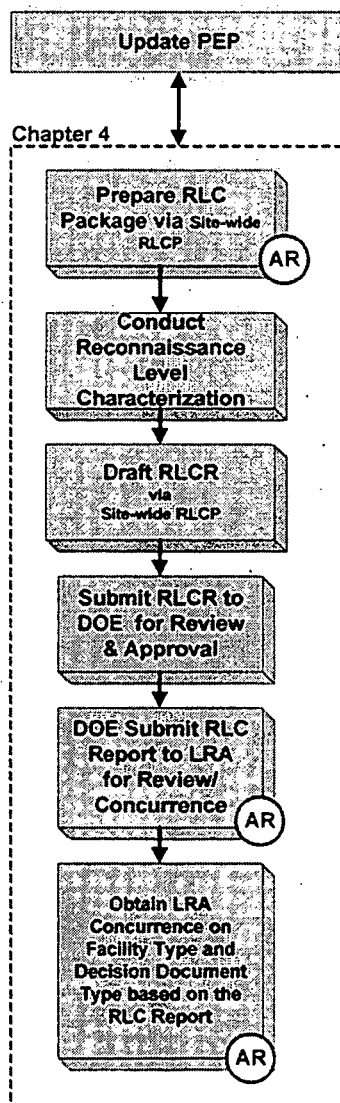
The characterization activities performed in this phase include the development of the RLC Package, coordination with the work planning and scoping activities, conducting the field characterization, development of the RLCR, and submittal of the RLCR through DOE for concurrence by the LRA.

Once the Phase I Planning is initiated, the PM **SHALL** use the Phase I Planning checklist to track the completion of the requirements outlined in this section. The Phase I Planning checklist **SHALL** be completed and signed by the PM and the D&D Division Manager prior to initiating Phase II planning. The Phase I Planning checklist is located at the end of this Section.

### 4.2 PROCESS LOGIC FLOW

The Phase I Planning activities are shown in the process logic flow in Figure 4-1. As discussed earlier, the project initiation and scoping activities have been completed prior to this phase of the facility disposition process. The list of Phase I Planning activities, as shown in the flow diagram, flow sequentially from top to bottom. The development of the PEP is shown as a long-bar at the top of the process flow diagram and encompasses the entire project life. During this phase, the PEP developed in the project initiation and scoping phase is updated and the RLC is developed, reviewed, and approved by DOE with concurrence by the LRA. The process flow diagram shows that the results from the RLC are used in the Phase II Planning and Engineering activities. In addition, the results from the confirmation of the facility type are used as the basis for developing the required RFCA Decision Document (e.g., DOP, IM/IRA, or-PAM).

Figure 4-1  
PHASE I PLANNING  
PROCESS FLOW DIAGRAM



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## 4.3 REQUIREMENTS

### 4.3.1 Update PEP

Based on the information and results from the Phase I Planning activities, the principal subcontractor PM prepares an update to the PEP developed for the project in the previous phase. The RLC, engineering assessments, and feasibility studies provide the key input for this update. Specific information to be provided in this updated PEP are listed and discussed in Section 2 and Appendix C-1. The following sections provide additional requirements and guidance for updating the PEP during this phase of the project.

#### 4.3.1.1 Preliminary Engineering Options Analyses

Engineering options analyses are the actions that support decisions between programmatic or technical alternatives. Not all activities in the planning and execution will present issues or require unique decisions; many activities will be nearly identical to activities in other projects or routine site activities. Where previous performance was adequate, further analysis is not required. Where previous performance was inadequate, new technology or approaches offer opportunities, unique features present problems, or uncertainties pose questions, the project **Should** identify as many options as reasonable to minimize having to revisit the issue at a later stage of planning or execution. The results of options analyses will be better defined in (and backup to) the Methods of Accomplishment Section of the PEP, definition of trade-off and engineering studies in subsequent planning, and identification of information required during characterization.

The project team identifies significant technical issues, based on knowledge of facility and the scoping-level characterization. These issues may be significant due to safety and environmental issues, cost impact (decommissioning or landlord), interface with other in-building organizations, differences or similarities with other projects, lessons learned, level of uncertainty, and integration with other Site projects (e.g. resources).

#### 4.3.1.2 Develop Contracting Strategy

In order to support planning and project execution, it is important that the project team begins to develop their strategy towards performing and executing the work. In this planning phase, the project team further develops the contracting strategy discussed in the joint scoping meeting. This could include: type of pricing, who is performing work (in-house, use of bargaining unit or building trades personnel). The project team continues to perform Davis-Bacon determinations (in accordance with the Davis-Bacon Process, 1-90000-ADM-9.05), as necessary, and develop RFPs required to avoid project delays.

When selecting subcontractors, the project team **SHALL** consider the subcontractor's ability and need to meet the requirements of the Site Health and Safety Program, Site Environmental Stewardship Program, and the Site QAP. This process will be conducted by utilizing the established Site procurement process for the selection of subcontractors.

#### 4.3.1.3 Develop Waste Management Strategy

In order to support Phase I planning, and to assess the impacts of waste generation on waste management and transportation, it is important to have a project waste management strategy, as early in the project as possible. In this Phase, the project team updates the waste estimates included in the CPB and any additional assessments. The project team defines the scope of

activities leading to the development of a Waste Management Plan based upon the results of the RLC, decontamination waste, and volume reduction evaluations required by the final PEP. The Waste Management Plan can be a separate document, or a section or attachment to the PEP.

#### **4.3.2 Reconnaissance Level Characterization**

Reconnaissance level characterization is performed to establish a definitive baseline of information when planning for decommissioning of Type 1, 2, and 3 facilities. This phase includes a review of information to establish a definitive baseline of contamination, hazards, and facility condition necessary to complete the planning effort. An overview of the entire characterization process for facility disposition projects, and how RLC fits into that process, is discussed in Section 2. Guidance for implementation of the scoping characterization requirements is provided in the DDCP.

##### **4.3.2.1 Prepare a Reconnaissance Level Characterization Package**

Per the RLCP, an RLC Package is prepared to establish the survey and sampling instructions for facility characterization for Type 1, 2, and 3 Facilities. The Package follows the guidance provided in the RLCP and outlines the sampling and survey methodology for characterization by defining the type, quantity, condition, and location of radioactive and hazardous materials.

##### **4.3.2.2 Conduct Reconnaissance Level Characterization**

Following preparation of the RLC Package, facility walk-downs are conducted by a team consisting of K-H D&D Program representatives and any other Site party directly affected by the disposition, such as, operations, deactivation, decommissioning, engineering, health and safety, radiation protection, nuclear and criticality safety, ESS, and safeguards and security.

The radiological and chemical (including PCBs and asbestos) condition of the facility are assessed in order to identify radioactive or hazardous waste storage areas, contaminated areas and hazards, as well as physical safety hazards or other conditions that could affect decommissioning activities.

##### **4.3.2.3 Prepare Reconnaissance Level Characterization Report**

A RLCR **SHALL** be prepared to document the results of the information gathered during the characterization effort and subsequent engineering studies and assessments, and to recommend the facility classification. This report provides the results, summarizes the hazards and risks associated with them and provides adequate detail to allow DOE to determine the facility classification. The RLCR **SHALL** follow the guidance provided in DDCP. The RLCR **Should** include:

- An executive summary, which provides a general overview and summary of the report.
- An introduction, which describes the purpose, scope and content of the report.
- A summary of characterization/survey activities, which describes the DQOs, sampling and field measurement/survey methods, procedures and equipment, and laboratory analysis.
- A review of the building/cluster operating history, which describes the history of the buildings, past and current operations, and a physical description of the building.
- An identification of building hazards (e.g., physical, radiological chemical, asbestos, pressure vessels, electrical, wastes, etc.).

- A discussion of decommissioning waste types and waste volume estimates.
- A discussion regarding data confirmation and a review of data quality assessments.
- A discussion supporting the recommendation on final facility type and a discussion regarding the next step in the facility disposition process including alternative assessments and engineering studies.

#### **4.3.2.4 Submit RLCR to DOE for Review and Approval**

Once characterization has been completed and a draft RLCR has been prepared, the RLCR and cover letter determination of requesting facility classification **SHALL** be forwarded to D&D Projects and project team representatives for review. Following comment resolution, the RLCR is approved by the D&D Projects Division Manager and submitted to DOE for review and approval. The level of detail and content is evaluated to assure compliance with the DDCP. Once approved by DOE, DOE submits the RLCR to the LRA.

#### **4.3.2.5 DOE Submits RLCR to LRA for Review and Concurrence**

The RLCR is forwarded by DOE to the LRA; the LRA has 14 calendar days to review the RLCR and the facility type classification. The completed RLCR and the concurrence letter from the LRA, if available, are placed in the project-specific administrative record file. The facility type confirmation is used as a basis for developing the required RFCA Decision Document in the Phase II Planning and Engineering. The LRA may concur, nonconcur, or not respond to the RLCR submittal. No response from the LRA after 14 days is considered approval.

PHASE I PLANNING CHECKLIST			
Project:		Project Manager:	
Activity	Exemption from D&D Division Manager	Date Completed	Signature
1. Update PEP. (FDPM, 4.3.1)			
2. Develop contracting strategy. (FDPM, 4.3.1.2) <b>Assess subcontractor ability to meet the RFETS health and safety and quality assurance requirements.</b>			
3. Develop waste management strategy. (FDPM, 4.3.1.3)			
4. Develop reconnaissance level characterization package in accordance with the Site-wide Reconnaissance Level Characterization Plan. (FDPM, 4.3.2.1)			
5. Conduct reconnaissance level characterization in accordance with reconnaissance level characterization package. (FDPM, 4.3.2.2)			
6. <b>Prepare Reconnaissance Level Characterization Report and complete reviews specified in document review matrix. (FDPM, 4.3.2.3)</b>			
7. Submit reconnaissance level characterization report to DOE for review and approval. (FDPM, 4.3.2.4)			
8. After LRA review and concurrence, place reconnaissance level characterization report and concurrence letter in the administrative record file. (FDPM, 4.3.2.5)			

Checklist Complete:

\_\_\_\_\_  
Kaiser-Hill Project Manager (print/sign)

\_\_\_\_\_  
Date

Approval to proceed to Project Close-out:

\_\_\_\_\_  
Kaiser-Hill D&D Division Manager (print/sign)

\_\_\_\_\_  
Date

## 5.0 PHASE II PLANNING AND ENGINEERING

The purpose of this chapter is to present the requirements and guidance for performing the Phase II Planning and Engineering activities of the facility disposition project just prior to project execution. The objective of this phase is to complete all the engineering, work planning, and authorization basis activities leading up to the readiness determination and final work preparations in the project execution phase. A major activity in this phase is to finalize and approve the PEP for work execution, which includes finalizing all the engineering design and scope determinations and the contracting strategy to update the PEP with expanded scope details based on the additional characterization, engineering studies, and engineering assessments.

### 5.1 OVERVIEW

Phase II Planning and Engineering is the culmination of many planning activities started in the two previous chapters, Scoping and Phase I Planning. In addition, several new activities related to work authorization and preparation for execution are completed. The key elements of this chapter are listed below:

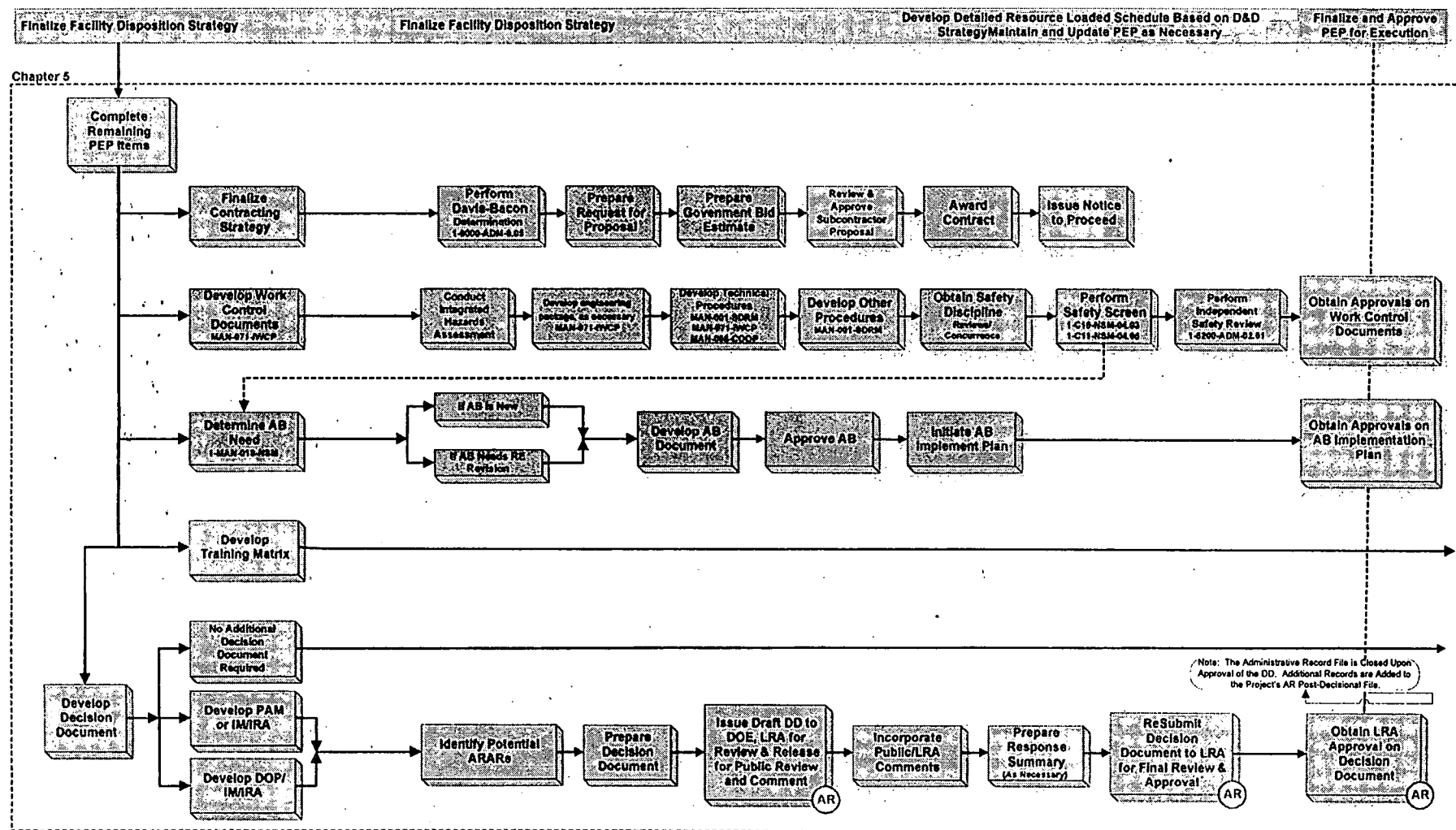
- Finalizing and approving the PEP
- Finalizing the contracting and procurement strategy
- Developing the work control documents
- Completing the AB documents
- Completing the RFCA Decision Documents

Once the Phase II Planning is initiated, the PM **SHALL** use the Phase II Planning checklist to track the completion of the requirements outlined in this section. The Phase II Planning checklist **SHALL** be completed and signed by the PM and the D&D Division Manager prior to initiating Execution Phase. The Phase II Planning checklist is located at the end of this Section.

### 5.2 PROCESS LOGIC FLOW

The Phase II Planning and Engineering activities are shown in the process logic flow diagram in Figure 5-1. The Phase I Planning activities have been completed prior to this phase of the facility disposition process. The key interface points are the results from the RLC and the confirmation of the facility type used as a basis for developing the RFCA Decision Document. The continued development of the PEP is shown as a long-bar at the top of the process flow diagram and encompasses the entire project life. In this phase the PEP is finalized and approved providing the final engineering design and scope and the basis for work execution. The other key activities involve developing the work control and authorization basis documents. The process flow diagram shows that the results from the Phase II Planning and Engineering activities come together to provide the basis for the implementing the work control documents and performing the final preparations prior to work execution.

Figure 5-1  
PHASE II PLANNING AND ENGINEERING  
PROCESS FLOW DIAGRAM



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### 5.3 REQUIREMENTS

#### 5.3.1 Finalize and Approve PEP

The facility disposition PEP was initiated (or updated if already started in deactivation phase) in the Project Initiation and Scoping Section and then updated in the Phase I Planning Section. At this point in the facility disposition process, it is time to reach closure on the first complete PEP for the project. Specific information to be provided in this final PEP is listed and discussed in Section 2 and Appendix C-1. The following sections provide additional requirements and guidance for finalizing the PEP.

##### 5.3.1.1 Complete Remaining PEP Items

The remaining items necessary to finalize the PEP are completed using the PEP template and guidance in Appendix C-1 to determine what may be needed. The Health and Safety Plan and Waste Management Plan are examples of documents or sections to be included in the final PEP. The quality strategy needs to be completed and incorporated in Section 14.2 of the PEP. This assessment will outline the criterion requirements that apply to the project using the graded approach. The project level documentation should include an assessment of the subcontractor quality program and how it will comply with the Site QAP. These plans *may* be separate documents attached to the PEP or separate sections within the PEP. In addition, the following items identified in Section 2 and Appendix C-1 are completed in this phase of the project:

- Contracting strategy,
- Training matrix,
- Resource loaded schedule,
- Work control documents,
- Authorization basis documents, and
- RFCA Decision Documents.

#### 5.3.2 Finalize Contracting Strategy

The preliminary contracting strategy for the facility disposition project was discussed during the scoping meeting. During the Phase I Planning efforts, the contracting strategy was revised and updated based on the Phase I activities. During the Phase II Planning efforts, the contracting and procurement strategy is finalized in preparation for executing the necessary procurement contracts and starting the work execution activities. The final contracting strategy **SHALL** be determined by the Project Team and documented in the PEP. The contracting strategy can include developing the engineering studies or work packages, work control documents, the authorization basis documents, or the RFCA Decision Documents. Therefore, some of the activities in Phase II Planning and Engineering *may* be performed by a subcontractor organization and others performed by the project team. In addition, subcontractor personnel could fill some of the project team positions. The following actions are followed in accordance with the site infrastructure:

- Performing Davis-Bacon determination,
- Preparing request for proposal,
- Preparing government bid estimate,
- Reviewing and approving subcontractor proposals,
- Awarding the subcontractor contract: and,
- Issuing the notice to proceed.

A template for developing the Statement of Work (SOW) is provided in Appendix D-1 to assist the project team in preparing the request for proposal. An application for pre-qualification of prospective bidders *may* be required if a subcontractor pool does not already exist. A template for this application is shown in Appendix D-2. A process description for administration of the pre-qualification pool is contained in Appendix D-3.

### 5.3.3 Work Control Document (WCD) Development

The IWCP Manual applies to all Site employees and subcontractors performing or supporting onsite work. All maintenance, modification, decommissioning, demolition, environmental remediation, operations, surveillance, and construction work at the Site is performed in accordance with the IWCP Manual. For the purposes of this manual, "work" will be interpreted as any of the above types of activities.

The IWCP Manual provides a method by which ISM is implemented on the job. It provides a single process through which all work on the Site is performed. It ensures that the work is screened consistently to uniform criteria and that hazards are appropriately analyzed and controlled. Based on the facility disposition scope defined and documented in the PEP, and the work planning previously completed in this chapter, work control documents are prepared in accordance with the IWCP Manual.

During Phase II Planning and Engineering, the facility disposition work scope is finalized and documented in the PEP, where it is divided into specific work elements. Each of the major work elements requires that one or more work control documents be developed to perform the work. Development of work control documents is an iterative process and includes review and assessment of the work products (e.g., SME concurrence, management reviews, independent safety review, and quality assurance evaluations). Feedback from previous work is used in the development of the work control documents.

#### 5.3.3.1 Determine Types of Work Control Documents Needed

Based on the facility disposition scope, which is divided into major work elements in the PEP, the Principal Subcontractor PM with support from the project team determines the appropriate type and number of work control documents required for each major work element. Guidance is provided in the IWCP Manual to assist the project manager in making these decisions. In addition, descriptions of the different types of work control documents are contained in the IWCP Manual.

#### 5.3.3.2 Form Work Planning Teams and Complete Work Control Documents

Based on the results of the ASF that determined the level of work planning required for the project, work planning teams are formed for each major work element of the facility disposition scope defined in the PEP. These work planning teams may have initiated the work elements required in the IWCP Manual during Phase I and II Planning and are now ready to develop the work control documents that incorporate the results of the planning efforts. The Principal Subcontractor PM directs the work planning teams to complete specific work control documents to support the major work elements of the project in the framework of an integrated hazard assessment. The methodology for conducting an integrated hazard assessment is discussed in the IWCP Manual. If required, the PM may form new work planning teams to develop the work control documents, or use some or all of the existing teams. Each type of work control document is developed, documented, and approved in accordance with the specific guidance and requirements in the IWCP Manual.

#### 5.3.4 Authorization Basis Document Development

Facility disposition projects usually involve activities that are not included in the facility AB document currently in place for the operations or deactivation phase of the facility. Therefore, as a minimum the facility disposition activities need to be reviewed to verify that they are included in the current facility AB document. In most cases, the change in mission or scope for the specific decontamination and decommissioning activities involved in a facility disposition project will require a revision or update to the facility AB document. This change to the facility AB is completed and implemented prior to the readiness determination, work preparation, and work execution phase of the facility disposition project.

For facilities that are classified as a Hazard Category 2 or 3 Nuclear Facility, the AB document is reviewed and approved by DOE and takes the form of a FSAR, BIO, or Basis for Operation (BFO). Note: There are no Hazard Category 1 nuclear facilities at RFETS. A revision to the current AB document is usually required for nuclear facilities due to the change in mission and scope of the facility from operations to closure. A safety evaluation is performed (SES/USQD) to determine the need for a revision or update to the facility AB. This revision can take the form of a new AB document, a page change, or preferably, can be completed during the annual update to the existing AB document. Significant changes to AB documents usually require an implementation plan to implement the revised facility control set.

For non-nuclear facilities (e.g., radiological or industrial facilities, less than Hazard Category 3) which are being planned for facility disposition, the AB is provided by the Site Safety Analysis Report (Site SAR). However, some projects may require that an Auditable Safety Analysis (ASA) is completed and constitute the contractor-approved authorization basis (non-capitalized) document for the facility disposition project. Facility Safety Analyses (FSAs) or other equivalent safety analyses can be performed as long as they meet the requirements and intent of ASAs.

The following requirements for the development of authorization basis documents related to facility disposition projects are divided into non-nuclear and nuclear facilities.

##### 5.3.4.1 NON-NUCLEAR FACILITIES

This section applies to facilities that are classified as less than Hazard Category 3 (e.g., "radiological" or "industrial" facilities) as defined in DOE Standard, DOE-EM-STD-5502-94, *Hazard Baseline Documentation*, August 1994.

If an authorization basis or safety analysis currently exists for the facility, the scope of the facility disposition project is compared to the scope analyzed in the safety analysis documentation. The changes in scope are identified and documented for further analysis. If no changes in the facility scope are required to accommodate the facility disposition project, document this review and continue with the facility disposition process in this chapter. If there is no authorization basis or safety analysis documentation for the scope of the facility disposition project, perform a safety analysis of the new scope in accordance with Step C below.

A safety analysis of the new or revised scope of work for the facility disposition project is performed and documented as an ASA (FSA or equivalent safety analysis) in accordance with the IWCP Manual. Additional guidance from the following documents is used to perform the ASA: DOE Standard, DOE-EM-STD-5502-94, *Hazard Baseline Documentation*, August 1994; and Kaiser-Hill Nuclear Safety Technical Report (NSTR), *Safety Analysis and Risk Assessment Handbook (SARAH)*, NSTR RFP-5098, Revision 1, April 22, 1997. The safety analysis

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documented above may be kept as a separate document, or included with the HASP for the project or facility. In addition, the hazard information collected and documented as part of the RLCR (See Section 4) can be used as input to the safety analysis for the authorization basis document. ASAs **Should** include, as a minimum, the following subsections:

- Facility/project activities analyzed
- Hazards identified
- Qualitative/quantitative analyses performed
- Controls required to prevent /mitigate hazards (administrative and engineered controls, including system functional requirements)

The completed safety analysis documentation (serving as the non-nuclear authorization basis documentation) **SHALL** be reviewed and approved by the K-H PM, the applicable Program Chief Engineer (PCE), and the Facility Manager. This approved documentation can be submitted to DOE and other regulatory agencies, for information only, at the discretion of the K-H PM.

Based on the completed safety analysis, any new or revised administrative or engineered controls are implemented in the facility by the Facility Manager. At the discretion of the Facility Manager, a formal Implementation Plan can be used to implement the new or revised controls depending on the extent and magnitude of the changes. Successful implementation of the changes in the facility authorization basis controls are verified in accordance with the Readiness Determination Manual.

#### 5.3.4.2 Nuclear Facilities

As required by the Nuclear Safety Manual and DOE Order 5480.23, *Nuclear Safety Analysis Reports*, this section applies to facilities that are classified as Hazard Category 2 or 3 "nuclear" facilities. This classification is defined in the following DOE Standards: DOE-EM-STD-5502-94, *Hazard Baseline Documentation*, August 1994; DOE-STD-1027-92, *Hazard Categorization and Accident Analysis Techniques for Compliance with DOE Orders 5480.23*, Nuclear Safety Analysis Reports, December 1992.

The change in scope or mission of the facility based on the proposed work being performed as part of the facility disposition project is reviewed in accordance with the Nuclear Safety Manual and the applicable safety evaluation process (SES/USQD) implemented for the facility. If the safety evaluation indicates that the new or revised activities can be performed within the current facility authorization basis document, then this review is documented and filed with the work control documents. If a change to the facility authorization basis document is required based on the safety evaluation, proceed to the next step to make the change.

There are several options for changing the document. The simplest is to make the change during the next annual update. Another option is to make a page change to the document that requires DOE approval. The most complicated change is to perform a major revision or to completely develop a new authorization basis document. All of these changes to the facility authorization basis document are performed in accordance with the Nuclear Safety Manual and the applicable implementing procedures for the facility. This includes performing a safety analysis (if required); determining necessary additional or revised engineered or administrative controls; developing changed pages, a revised document, or a new document; and going through the review and approval process (internally and DOE). Some information from the safety analysis and control set determination can be useful to the work planning teams developing the work control documents and to the project team developing the HASP for the project or facility.

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Based on the revised or new authorization basis document, any new or revised administrative or engineered controls that are required to be implemented in the facility in order to perform the facility disposition project are implemented by the Facility Manager in accordance with the Nuclear Safety Manual. At the discretion of the Facility Manager, a formal Implementation Plan can be used to implement the new or revised controls depending on the extent and magnitude of the changes. Successful implementation of the changes in the facility authorization basis controls are verified in accordance with the Readiness Determination Manual.

### 5.3.5 RFCA Decision Document Development

This section presents the requirements for the development of a RFCA Decision Document for each of the three facility types. The guidance for determining if a RFCA Decision Document is required is contained in Section 1.1.4 of the DPP. If a RFCA Decision Document is required for the project, the specific requirements and guidance for developing the RFCA Decision Document by facility type is discussed below. Appendix D-4 presents a template for development of the RFCA Decision Documents that is applied using a graded approach for a PAM, IM/IRA, or DOP.

#### 5.3.5.1 RFCA Standard Operating Protocol

An RSOP is an approved protocol that applies to a routine decommissioning and environmental restoration activity regulated under RFCA. An RSOP can be used in lieu of preparing a project-specific decision document for repetitive, routine activities. An RSOP must be approved only once, although it may be used on several projects. However, DOE must notify the LRA that the RSOP will be used on a specific project. Since decommissioning activities are often similar in nature, RSOPs are an effective way to document work processes while minimizing paperwork at the project level. The project team should determine if any approved RSOP applies to any of the project activities. If an approved RSOP does exist, the project **SHALL** write a letter to DOE specifying where and how the RSOP will be implemented.

#### 5.3.5.2 Type 1 Facility RFCA Decision Documents

Decommissioning of facilities classified as Type 1 (uncontaminated) based on a RLCR do not require any additional RFCA Decision Documents and can proceed based on plant procedures and infrastructure. However, a scoping meeting and notification letter is required. If contamination is discovered during decommissioning of a facility classified as Type 1, decommissioning activities in the affected areas **SHALL** cease until the LRA is notified and the potential need to reclassify the facility is collaboratively considered.

Discovery of contamination after the determination that the facility is Type 1 *may* not necessarily result in the need to reclassify a facility into the Type 2 classification. If contamination can be removed by methods in which there is no threat of release of a hazardous substance to the environment, for example by simply cutting out the fixed contamination, the facility *may* remain as Type 1. Contamination **SHALL** be cleaned up and properly disposed using existing radiological and hazardous waste management procedures.

Reclassification as a Type 2 facility **SHALL** be considered in any instance where removal techniques involve a threat of release of a hazardous substance environment (as determined by the consultative process with DOE and the LRA).

No further regulatory involvement for Type 1 facilities is required for facilities containing asbestos, provided the project team follows the requirements of the Site asbestos management program.

For Type 1 facilities containing PCBs that are not contaminated with radioactive materials, no further regulatory involvement is required, provided the project team follows the requirements of the Site PCB management procedures. In this case, no further RFCA Decision Documents are required and the waste is managed in accordance with regulatory and procedural documents.

#### 5.3.5.3 PAMs and IM/IRAs

PAMs are applied when the project execution can be completed within 6 months and IM/IRAs are applied when the execution time is 6 or more months. The process for approval of PAMs and IM/IRAs, and the required contents for each, are presented in RFCA paragraphs 106 and 107, respectively. The template, table of contents, and document preparation guidance for developing a RFCA Decision Document are provided in Appendix D-3. Using a graded approach, this template is tailored for a PAM or IM/IRA as discussed with the LRA in the joint scoping meeting.

The PAM or IM/IRA **SHALL** be submitted to DOE for review and approval. After comment resolution and DOE approval, DOE may submit the PAM to the LRA and release it for public comment. DOE submits the draft IM/IRA to the LRA fourteen days before releasing it for public comment. DOE and the LRA will agree in advance to the length of the public comment period. Following resolution of the public comments, a responsiveness summary is prepared and the PAM or IM/IRA is revised, if necessary, and approved by the LRA. The draft RFCA Decision Documents, responses to official regulatory comments, formal responsiveness summaries, and the final PAM or IM/IRA is placed in the project-specific administrative record file.

#### 5.3.5.4 DOPs

The DOP is prepared and approved in accordance with the RFCA IM/IRA approval process. The DOP contains sufficient information so the regulators can be satisfied that the project can proceed compliantly, with a high probability of success. Support facilities associated with a major project may be included in the DOP if they can be managed in the same project. The template, table of contents, and document preparation guidance for RFCA Decision Documents (including DOPs) are provided in Appendix D-4. Using a graded approach, this template is tailored for a DOP.

The project team **SHALL** prepare the DOP and submit it to DOE for review and approval. After comment resolution and DOE approval, DOE submits the draft document to the LRA fourteen days before releasing it for public comment in accordance with the RFCA IM/IRA approval process. DOE and the LRA will agree in advance to the length of the public comment period (either 45 or 60 days). Following resolution of the public comments, a responsiveness summary is prepared and the DOP is revised, if necessary, and approved by the LRA. The draft RFCA Decision Document, responses to formal regulatory comments, formal responsiveness summaries, and the DOP is placed in the project-specific AR file.

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PHASE II PLANNING CHECKLIST			
Project:		Project Manager:	
Activity	Exemption from D&D Division Manager	Date Completed	Signature
1. Finalize contracting strategy and document in PEP. (FDPM, 5.3.2)			
2. Finalize, complete required review as specified in Appendix A-3 of the FDPM, and obtain approval of PEP. (FDPM, 5.3.1)			
3. Develop Statement of Work in accordance with Appendix D-1 of the FDPM. (FDPM, 5.3.2)			
4. Complete application for pre-qualification of prospective bidders, if necessary, in accordance with Appendix D-2 of the FDPM. (FDPM, 5.3.2)			
5. Determine types of work control documentation required. (FDPM, 5.3.3.1)			
6. Form work planning team and complete work control documents. (FDPM, 5.3.3.2) • Attach a list of the work control documents developed			
7. Develop authorization basis document and complete required review as specified in Appendix A-3 of the FDPM. (FDPM, 5.3.4)			
8. Develop RFCA decision document and/or prepare notification letters to utilize existing RSOPs. (FDPM, 5.3.5) • Attach a list of decision documents that will be used for the project			

Checklist Complete:

\_\_\_\_\_  
Kaiser-Hill Project Manager (print/sign)\_\_\_\_\_  
Date

Approval to proceed to Project Close-out:

\_\_\_\_\_  
Kaiser-Hill D&D Division Manager (print/sign)\_\_\_\_\_  
Date

## 6.0 PROJECT EXECUTION

The purpose of this chapter is to present the requirements and guidance for performing activities in the project execution phase of the project, following completion of the Phase II Planning and Engineering. The objective of this phase is to complete the work preparations and then execute all planned work.

### 6.1 OVERVIEW

The activities performed in this chapter include executing the procurement contracts finalized in Section 5, demonstrating a readiness to proceed, and executing the actual physical work activities within the major headings of site preparation, dismantlement, demolition, and transition to environmental restoration. The decision document and PEP finalized in Section 5 contain the methods and schedule of performance for the work.

Site preparation activities include mobilization, isolation of building services, installation or removal of services as needed for the project. Dismantlement includes removal of process equipment and the equipment and services that directly support it. In-process characterization is performed during dismantlement with the resulting documentation being formatted to support the Pre-Demolition Survey. building surface decontamination is the preparation and documentation for demolition. The surveys generated during building surface decontamination are compiled with the appropriate in-process characterization data to form the Pre-Demolition Survey. Demolition includes the physical work to bring the facility including the slab (defined as the footprint or pad that is left following demolition).

The final step in project execution prior to close out is the transition to environmental restoration. This includes surveying and documenting the slab(s) and verifying that any under slab contamination is acceptable to leave for future environmental restoration. The Site's ER organization participates in the review of the results of the sampling. This will determine if immediate action is necessary. It is intended that the transition of physical work between decommissioning and ER will be seamless, with ER involvement increasing as the transition approaches and decommissioning involvement decreasing after.

During project execution, the PEP and its applicable supporting plans are updated periodically with the changing information found during the in-process characterization and above listed activities. Waste is managed in accordance with the project's WMP contained in the PEP. As new information is obtained that significantly impacts the categorical generation rates, the Site's WM Organization is notified of this impact.

Once the Execution Phase is initiated, the PM **SHALL** use the Execution checklist to track the completion of the requirements outlined in this section. The Execution checklist **SHALL** be completed and signed by the PM and the D&D Division Manager prior to initiating Close-out. The Execution Phase checklist is located at the end of this Section.

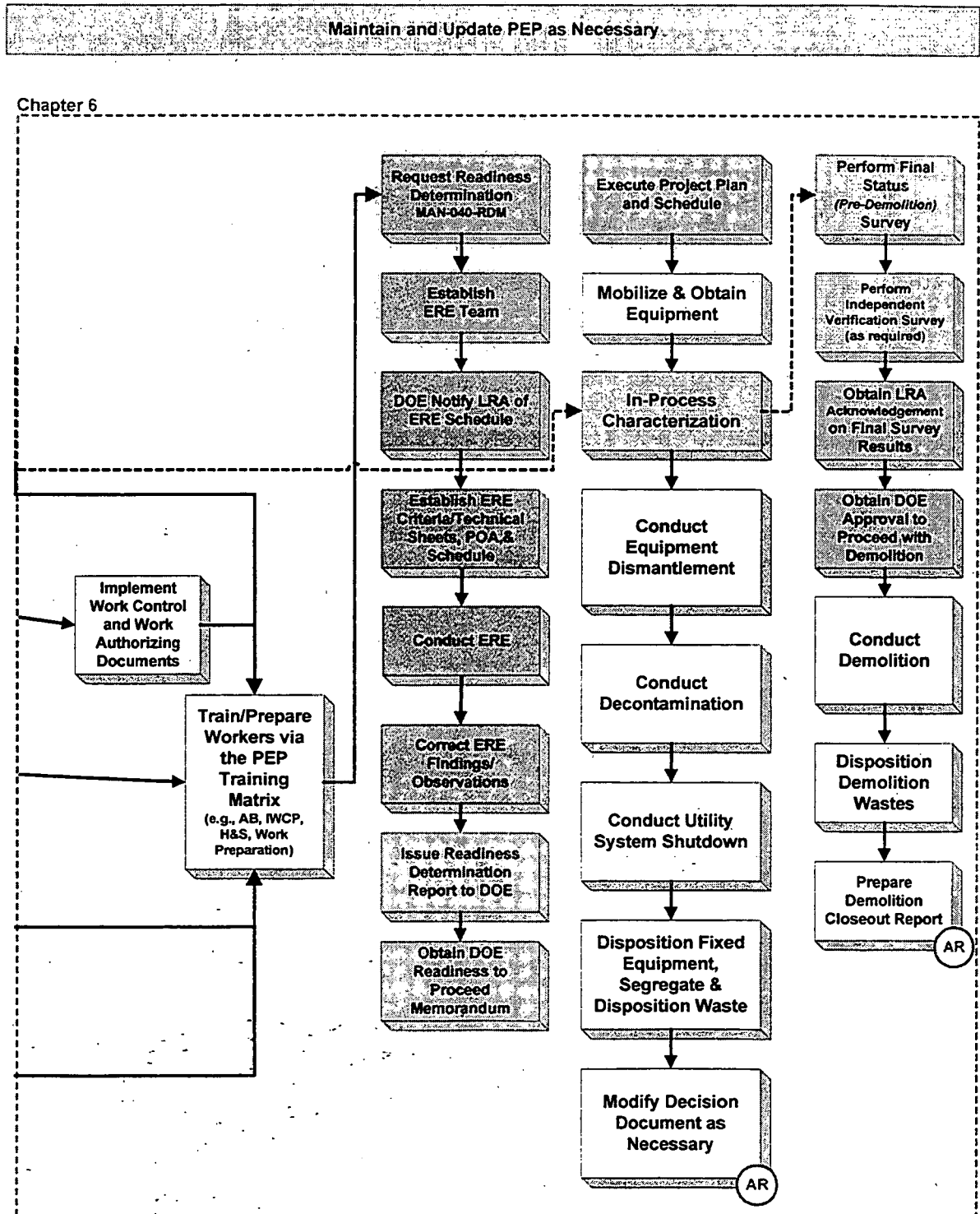
### 6.2 PROCESS LOGIC FLOW

The activities involved in the project execution phase are shown in the process logic flow diagram in Figure 6-1.

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Figure 6-1  
PROJECT EXECUTION  
PROCESS FLOW DIAGRAM



### 6.3 REQUIREMENTS

For Type 1 facilities, many of the steps and requirements described below are eliminated. For all facility types, the DPP is a RFCA Decision Document that is used in the preparation of any additional facility specific Decision Documents, if required. In accordance with the DPP, decommissioning of buildings classified as Type 1 (uncontaminated) based on a RLCR will not require additional RFCA Decision Documents (other than the DPP) and will proceed based on plant procedures. However, if contamination is discovered during decommissioning of Type 1 facilities, decommissioning activities **SHALL** cease in the affected areas, until the LRA is notified and the potential need to reclassify the facility is considered collaboratively.

Reclassification from a Type 1 to a Type 2 facility **SHALL** be considered in any instance where removal techniques may involve a threat of release of a hazardous substance (as determined by the consultative process) to the environment.

Decommissioning of Type 1 facilities is therefore, simplified to a commercial-type facility removal project. Decontamination is not required, and no pre- or post- demolition survey report is required. The RLCR with LRA concurrence regarding the facility type (if provided per section 3.4.4 of the DPP) and the project close-out report **SHALL** be included in the AR as a project-specific AR file. These documents are available to support the final Corrective Action Decision/Record of Decision (CAD/ROD) for the appropriate OU.

Project execution utilizes the documentation generated in accordance with the previous chapters of this manual. Governing Site requirements **SHALL** also be followed during the execution of the project. For example, the subcontractors **SHALL** perform the work in accordance with the Conduct of Operations Manual, MAN-066-COOP. That is, follow the established procedures, conduct the required pre-evolution briefings, utilize a work force trained and qualified for the job, and conduct plan-of-the-day meetings.

Maintaining a safe working environment and a safety awareness culture is paramount to the success of the project and the K-H Team. The performance subcontractor **SHALL** have, and comply with, a HASP approved by the K-H team. The RFETS Health and Safety Practices Manual provides additional requirements for Site specific working conditions with which each subcontractor **SHALL** comply.

Job specific radiological safety is enhanced by the use of the RFETS Radiological Control Manual. Subcontractors **SHALL** execute the work in accordance with this manual. As part of this process the performing subcontractor **SHALL** submit the project work instructions, with the potential of encountering levels of radiological contamination above background, to the appropriate Radiological Control Organization so that a Radiological Work Permit, tailored to the projected working conditions, *may* be generated. The subcontractor **SHALL** follow the established RWPs.

Maintaining a safety awareness culture is enhanced through the use of the principles of the ISMS. These principles are implemented through the IWCP, reference Section 5. All work plans **SHALL** be reviewed with the employees performing the work. Comments from the employees on these plans **SHALL** be considered. After the work plans are finalized, the work steps **SHALL** be reviewed with employees (this **Should** occur not later than the pre-evolution briefing).

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### 6.3.1 K-H READINESS DETERMINATION

The project team performs a Readiness Determination in accordance with the Readiness Determination Manual to ensure that the project is ready to be performed or executed. To ensure that the Readiness Determination is adequately funded, the subcontractor PM **SHALL** prepare project technical description sheets (the format is provided in the Readiness Determination Manual), with a recommended level of Readiness Demonstration and approval authority, and submit them to the K-H PM. The K-H PM **SHALL** agree to the level of Readiness Demonstration that is adequate for the project, and **SHALL** ensure that the package is submitted to DOE for review. DOE reviews the package and forwards the decision back to K-H.

After all decommissioning project regulatory and operational documentation is approved and the performing subcontractor has trained its personnel to the appropriate level of qualification, the performing subcontractor PM **SHALL** ensure that the objectives for operational readiness, as listed below, are satisfied. When these objectives are satisfied, the PM **SHALL** prepare the Readiness Certification Memorandum and forward it to the subcontractor President for approval.

#### 6.3.1.1 Conduct Personnel Training

All training conducted for the project execution **SHALL** be in accordance with the Training Users Manual 96-RF/T&Q-0005. If the K-H team determines that a RCRA unit will be managed in full compliance with RCRA, i.e., the substantive and administrative requirements, then the unit owner, unit custodian, and inspectors **SHALL** be trained in accordance with the RCRA Part B Permit.

In addition, if K-H Team bargaining unit employees are performing physical work, then these workers **SHALL**, at a minimum, be trained the courses defined for the D&D Worker classification. If the hands-on work is **NOT** being performed by K-H Team Bargaining Unit employees, then these workers **SHALL**, at a minimum, be trained with the courses of equivalent content to that of the D&D Worker classification, as approved by a K-H Team Training Coordinator. The core training requirements for D&D Workers are presented in Appendix E-1.

#### 6.3.1.2 Conduct Graded Project Readiness Determination

Kaiser-Hill conducts a graded approach Readiness Determination in accordance with the Readiness Determination Manual, 1-MAN-040-RDM. The following summarizes the objectives of the Readiness Determination:

- The activities can be conducted within the approved safety and authorization basis,
- The systems, structures, and components that are important to safety are identified and are in a condition to assure an acceptable level of safety,
- Operational or work procedures are identified and are adequate to control the processes and assure an acceptable level of safety,
- Personnel have adequate levels of knowledge, qualifications, and experience such that satisfactory formality of operations will be assured, and
- Necessary support infrastructure is adequate to conduct the activity safely
- All environmental concerns from the ESS organization have been addressed.

When the project is ready to be subjected to the Readiness Determination, the principal subcontractor President **SHALL** issue a Readiness Certification Memorandum, accompanied by an Implementation Plan that certifies that the activity is ready to commence operations with the

existing personnel, equipment, and procedures. This Memorandum **SHALL** be forwarded to the K-H Operational Organization Vice President.

The K-H Operational Organization Vice President **SHALL** endorse the Readiness Certification Memorandum and forward it to DOE Deputy Manager of Technical Programs and the K-H Independent Safety Oversight Division Manager.

The Environmental Compliance Division of DOE conducts a graded ERE, as appropriate. DOE prepares, reviews, and approves a letter to K-H stating the disposition. Decommissioning operations are authorized after any conditions to be corrected are completed.

The extent and complexity of the Readiness Determination can be obtained by following the Guidance Tree in Appendix 4 of the Readiness Determination Manual, 1-MAN-04-RDM. It may be as simple as a Management Review by the K-H Team, or as complex as a Readiness Review up to and including Operational Readiness Review by K-H and the DOE.

#### 6.3.1.3 Preparation For Physical Work

To demonstrate readiness, the subcontractor will have already mobilized forces. Due to the comprehensiveness of most Readiness Determinations, the duration for the activity will likely be greater than several working days. This time may be used by the subcontractor to refine the detailed project schedule, develop the daily planning sheets, and brief personnel on all project and other required documentation, especially the work control procedures developed to complete the project. In the spirit of ISM, familiarizing personnel with floor plans, work sets, area specific hazards and mitigating factors, performing walk-throughs of the project schedule, as it relates to the different work sets, updating briefings on radiological and hazardous waste control requirements, as well as authorization basis document requirements, may also be helpful. In addition, equipment could be staged, offices and break areas established, and plan-of-the day forms and meetings formulated.

#### 6.3.2 COMMENCEMENT OF EXECUTION ACTIVITIES

After demonstrating the readiness to proceed, the project is ready to initiate physical decommissioning activities, in accordance with the PEP (and other project documentation). The commencement of project execution activities normally begins with the isolation of Building Services including activities such as disconnecting the facility from as many plant services as possible prior to dismantlement, such as:

- Fire suppression water lines
- Electrical power lines
- Natural gas lines
- Process waste lines
- Steam supply and condensate return lines
- Telephone lines
- Local Area Network lines
- Water and sewer lines

***Note:** The bullet lists provided in this section are not intended to be all-inclusive, but rather examples of the types of activities that may be required to be performed*

The following activities related to installation and/or removal of services, systems, facilities, or hazards can also occur prior to or during physical dismantlement of the building:

- Temporary installation of services needed to support project operations that in some cases are temporary alternatives to services to be taken out for project efficiencies. For example, installation of power to offices and work areas to support lighting and decommissioning equipment that *may* be disconnected at the main switch gear, to avoid multiple costly Lock Out/Tag Outs.
- Removal of all exposed electrical distribution cables, conduit, panels, fixtures, devices, and trays that can be removed prior to dismantlement operations.
- Removal of all non-load bearing partitions and walls and false ceilings constructed of wood, transite, and wallboard in accordance with the facility authorization basis (non-credited fire barriers).
- Removal of HVAC ducts not important to safety, outlets, and hangers that can be removed prior to dismantlement operations.
- Removal of all fire protection systems that can be removed prior to dismantlement operations.
- Removal of all windows, glass and frames constructed of combustible material that can be removed prior to dismantlement operations.
- Removal of all combustible material and loose metal in the area.
- Removal of asbestos, asbestos waste, or asbestos abatement, which **SHALL** be:
  - Performed by a licensed asbestos abatement contractor,
  - In compliance with Colorado Air Quality Control Commission Regulation 8, *Control of Hazardous Air Pollutants* (SCCR-1001-10), and
  - Packaged and disposed of in accordance with Site (refer to Waste Management Section below) and State regulations.

*Note: This does not describe Type 3 Facilities, include mobilization or site prep, deactivation turnover/interface*

### 6.3.3 DISMANTLEMENT

Deactivation and/or major hazard reduction occurs ahead of dismantlement. A partial list includes activities such as: removal of excess chemicals, tooling, empty cabinets, office furniture, miscellaneous tooling, excess equipment, the draining and dispositioning of liquid wastes, stabilization of contamination where appropriate, disposition of records, and wiping of gloveboxes.

Deactivation and major hazard reduction are activities that remove all the loose equipment and other contents from process equipment, leaving a shell of process equipment in preparation for dispositioning in dismantlement. Dismantlement removes all the process equipment and performs in-process characterization within the facilities in preparation for decontamination of the areas within the facility shell. Building surface decontamination and documentation of surveys for the Pre-Demolition Survey prepares the facility shell for demolition.

Dismantlement includes removing process equipment, closing remaining RCRA units, removing all remaining distributed systems (utilities), performing in-process characterization, and decontaminating all facility surfaces that are above the release criteria. These activities **SHALL** be performed in accordance with the decision document, PEP, and work control procedures.

### 6.3.3.1 In-Process Characterization

In-process characterization is performed to evaluate on-going decommissioning activities in preparation for facility disposition. This characterization is performed to assure that adequate data is obtained for waste management, transportation, and building surface decontamination (for facility dispositioning) purposes. This characterization also aids in identifying new hazards uncovered during the dismantlement strip out operations that were not identified in the RLCR. If this occurs, cease operations in the affected areas, contact DOE, and initiate the consultative process. Although a formal report is not required for this phase of characterization, the DQOs and decision rules for radionuclides, asbestos, hazardous and toxic materials, and other constituents of concern, contained in Appendix B, of the DDCP, **SHALL** be followed.

The decontamination work will be closely related with the operations support of characterization and pre-demolition survey reports. This work carries the highest cost and schedule risk since the exact amount of work required cannot be determined until the survey work is finished. This work may involve packaging of building materials, characterization, removal of surface coatings, scabbling of concrete surfaces, and decontamination of building surfaces.

### 6.3.3.2 Pre-Demolition Final Survey Report

The data obtained from sampling and surveys during Dismantlement **SHALL** be retained, tabulated, and summarized in the Pre-Demolition Survey Report. An annotated outline of the Pre-Demolition Survey Report is presented in the Site-wide Pre-Demolition Survey Plan. The Pre-Demolition Survey Report is a RFCA-mandated report. This report **SHALL** provide data on the nature and extent of radiological and chemical contamination after dismantlement (including decontamination).

In accordance with the DPP and RFCA Decision Document, at the conclusion of dismantlement and preparation of the Pre-Demolition Survey Report, Site personnel will confirm their activities have achieved the criteria for the completion of building disposition for buildings that are demolished. After approval from the LRA, facility demolition *may* occur.

On an as needed basis, DOE may elect to verify that the results from the Pre-Demolition Survey meet acceptable criteria. Independent review of documentation, survey, and sampling data may be conducted to confirm that requirements identified in the characterization plans were implemented and that characterization was performed within control requirements and tolerances.

### 6.3.4 DEMOLITION

After completing dismantlement and decontamination, the last steps prior to demolition include: completion of the Pre-Demolition Survey Report, preparation of the Demolition Plan, and completing the demolition notification to CDPHE.

Demolition consists of removing the remainder of the physical structures, monitoring for releases during demolition, if required, and dispositioning the resulting waste streams. Specific demolition activities include:

- Removal and disposition of roof top equipment.
- Removal of roofing material down to the primary roof barrier (concrete slab or steel sheet.
- Removal of equipment attached to the building walls or adjacent to the building.

- Removal of structures
- Rubblizing of the walls and loading and transport to a sanitary landfill or stockpiled for recycling.
- Some separation of structural steel from the concrete rubble, but only as necessary to facilitate loading, hauling, and/or stockpiling.

The Principal Subcontractor PM **SHALL** prepare and submit a Demolition Closure Report to the K-H D&D Division Manager to be forwarded to DOE and on to the LRA. The Demolition Closure Report **SHALL** be placed in the project-specific AR.

### 6.3.5 TRANSITION TO ENVIRONMENTAL RESTORATION

Prior to the initiation of decommissioning activities, monitoring efforts (monitoring for surface water, groundwater, and air) are required to establish the baseline conditions that exist in the Industrial Area. This effort is coordinated with the K-H WRO (ER projects) and ESS organizations. To establish good baseline conditions, this effort **Should** occur very early in the decommissioning scoping phase and **SHALL** be incorporated into the IMP update.

The K-H WRO (Restoration Projects) and ESS organizations **SHALL** be integrated into decommissioning project scoping to develop an understanding of the project, such as type of contaminants expected in the building in order to decide whether adequate monitoring is in place to establish the baseline conditions; to decide what part of the structure will be left at the end of decommissioning; and to define the anticipated role of the ER projects at the end of decommissioning. Following decommissioning, areas beneath and adjacent to the building will be dispositioned either by remediation or preparation of a no-further-action justification document.

### 6.3.6 CONSTRUCTION MANAGEMENT DURING EXECUTION

During project execution the following construction related reports **SHALL** be required, if the facility disposition project involves any construction or deconstruction activities.

#### REQUIRED CONSTRUCTION REPORTS

##### Construction Work In Progress Report

A Construction Work in Progress (CWIP) Report listing all active facility disposition and construction projects **SHALL** be prepared monthly and provided to K-H Accounting. The CWIP Report provides tracking information on planned and actual construction and project completion dates.

##### Procurement Report

A Procurement Report **SHALL** be prepared for active facility disposition and construction projects providing a listing of all planned, in-progress, and completed procurement activities. This report identifies pending procurement activities and includes data to track those activities to completion. This report is used by Procurement to plan and track workload. This report is also used by the Construction Management Group within the D&D Projects Division to plan and oversee the administration of construction contracts and subtasks and, plan project craft and support personnel requirements.

### REQUIRED CONSTRUCTION REPORTS

#### Daily Construction Reports

During active construction, starting with the Notice to Proceed and ending with the Final Project Close-out, a daily construction report **SHALL** be prepared and distributed. The general form and content of this report is shown in Appendix C-3. The daily construction report **SHALL** be prepared by the construction manager and delivered to project team members at the close of each business day.

#### Monthly Personnel Resource Usage Report

The construction manager **SHALL** prepare a monthly manpower report as shown in Appendix C-4. This report will be provided to the D&D Project Office by the fifth working day of the Month. Construction tasks being performed by a subcontractor are not included in this report.

#### Construction Progress Photos

During active construction the PM **SHALL** document job progress by photographing significant changes in job. On minor projects, photos **SHALL** be taken at least once during a job. On significant projects, photos **SHALL** be taken at start of each project and at least weekly thereafter. The copies of the photos **SHALL** be printed with one copy going into the project file and two copies being provided to the D&D Project Office. All photos **SHALL** be captioned as shown in Appendix C-5.



PROJECT EXECUTION CHECKLIST			
Project:	Project Manager:		
Activity	Exemption from D&D Division Manager	Date Completed	Signature
1. Review technical description sheets prepared by subcontractor, agree to level of readiness and submit to DOE for review. (FDPM, 6.3.1)			
2. Ensure personnel training is complete for K-H and subcontractors. (FDPM, 6.3.1.1)			
3. Conduct graded project readiness determination in accordance with the Readiness Determination Manual, 1-MAN-040-RDM. (FDPM, 6.3.1.2)			
4. Review subcontractor's readiness certification memorandum and implementation plan and forward to K-H Operational Organization Vice President for endorsement. (FDPM, 6.3.1.2)			
5. Conduct in-process characterization activities in accordance with Appendix B of the D&D Characterization Protocol. (FDPM, 6.3.3.1)			
6. Develop pre-demolition survey package in accordance with the Site-wide Pre-Demolition Survey Plan.			
7. Conduct pre-demolition survey in accordance with reconnaissance level characterization package.			
8. Prepare Pre-Demolition Survey Report in accordance with the Site-Wide Pre-Demolition Survey Plan and have reviewed in accordance with document review matrix. (FDPM, 6.3.3.2)			
9. Submit Pre-Demolition Survey Report to DOE for review and approval.			
10. After LRA review and concurrence, place Pre-Demolition Survey Report and concurrence letter in the administrative record file.			
11. Review Demolition Plan prepared by subcontractor.			
12. Notify the Site Waste Management Organization of the estimated project waste generation, by category. (FDPM, 2.3.5)			
13. Update the Waste Management Plan to reflect significant changes in generation rates. (FDPM, 2.3.5)			
14. Prepare Construction Work in Progress Reports monthly during demolition activities. (FDPM, 6.3.6)			
15. Prepare procurement report. (FDPM, 6.3.6)			
16. Ensure that the construction manager prepares daily construction reports from the notice to proceed until project close-out and distributes to project team members at the close of each business day. (FDPM, 6.3.6)			
17. Ensure that the construction manager prepare monthly man-hour report and submits these report the fifth working day of the month. (FDPM, 6.3.6)			

PROJECT EXECUTION CHECKLIST			
Project:		Project Manager:	
Activity	Exemption from D&D Division Manager	Date Completed	Signature
18. Ensure that photographs are taken of all project progress. (FDPM, 6.3.6)			
19. Review Demolition Closure Report prepared by subcontractor and submit to D&D Division Manager and place in AR file. (FDPM, 6.3.4)			

Checklist Complete:

\_\_\_\_\_  
Kaiser-Hill Project Manager (print/sign)

\_\_\_\_\_  
Date

Approval to proceed to Project Close-out:

\_\_\_\_\_  
Kaiser-Hill D&D Division Manager (print/sign)

\_\_\_\_\_  
Date

## 7.0 PROJECT CLOSE-OUT

The purpose of this chapter is to present the requirements and guidance for performing activities in the project close-out phase of the project which follow completion of work execution and transition to ER. Preparation for the closeout of all projects begins in the planning phase with definition of project specific acceptance and closeout criteria included in the PEP and the identification and subsequent development of other planning and work control documents.

In the closing-out of the project, there are several activities that take place. These include the generation and/or closeout of:

- Partial And Complete Subcontract Close-Out Form (*Appendix F-1*)
- Project Beneficial Occupancy Notice (*Appendix F-2*)
- Project Acceptance And Transfer Form (*Appendix F-3*)
- Suggested Subcontractor Performance Evaluation (*Appendix D-2*)
- Project Final Closeout Form (FPCO) (*Appendix F-4*)
- Project Lessons Learned Report
- Final Facility Disposition Decommissioning Closeout Report
- IWCP, including all Engineering documentation and associated work control forms, e.g., Radiological Work Permits, excavation work permits, hot work permits, etc.

Appendix C provide more details and discussion on the types of reports typically generated during the project and which ones *may* need to be closed out. Appendix A-1, the Generic D&D Project File Index and Completion Checklist provides the mechanism to identify what documents were generated and need to be collected and closed-out for the specific project.

**Note:** As part of Close-out actions, it is important to ensure that the Administrative Record is complete.

## 7.1 OVERVIEW

Preparation for the acceptance and closeout of all projects begins in the planning phase with definition of project specific acceptance and closeout criteria included in the PEP. The acceptance and closeout criteria **SHALL** define project specific tasks, tests, inspections, approvals, and other documentation necessary for project completion, acceptance, and transfer.

The PM **SHALL** ensure that all project records are complete, current, and retained in a manner that ensures the files can be assembled and provided to the records management organization for proper storage, following project completion. The official and permanent project file **SHALL** be established and maintained by the PM and **SHALL** meet the criteria established during the initial scoping phase in the joint scoping meeting.

All records acquired or generated by the decommissioning project shall be dispositioned in accordance with procedure 1-V41-RM-001 *Records Management Guidance for Records Sources*. Electronic Systems shall be dispositioned in accordance with procedure PRO-447-ERM-001 *Electronic Information System Inventory and Retirement Form*. The project files **SHALL** be organized and maintained in accordance with the PEP, the Generic D&D Project File Index and Project Deliverables Matrix provided in Appendices A-1 and A-2, respectively.

Once Close-out Phase is initiated, the PM **SHALL** use the Close-out Phase checklist to track the completion of the requirements outlined in this section. The Close-out Phase checklist **SHALL** be completed and signed by the PM and the D&D Division Manager prior to project completion. The Close-out checklist is located at the end of this Section.

## 7.2 PROCESS LOGIC FLOW

The activities involved in the project execution phase are shown in the process logic flow diagram in Figure 7-1.

## 7.3 REQUIREMENTS

### 7.3.1 PROJECT DOCUMENTATION

Facility disposition projects and construction projects are documented, tracked, and reported in compliance with all applicable Site requirements. Project controls are established to ensure documentation continuity, integration, and consistency. Individual documentation requirements and control criteria are established and defined within the PEP on a graded approach by each project. Specific documents that may be required for facility disposition and construction projects are provided in Appendix A-2. These documents should be reviewed and approved in accordance with the D&D Document Review Matrix in Appendix A-3. In-process document control is discussed in Section 2.

Applicable project acceptance and close-out documentation for all facility disposition projects and construction projects **SHALL** be prepared, approved, and retained in the permanent project file by the PM. Appendices C and F provide examples and templates of the various project acceptance and closeout documentation.

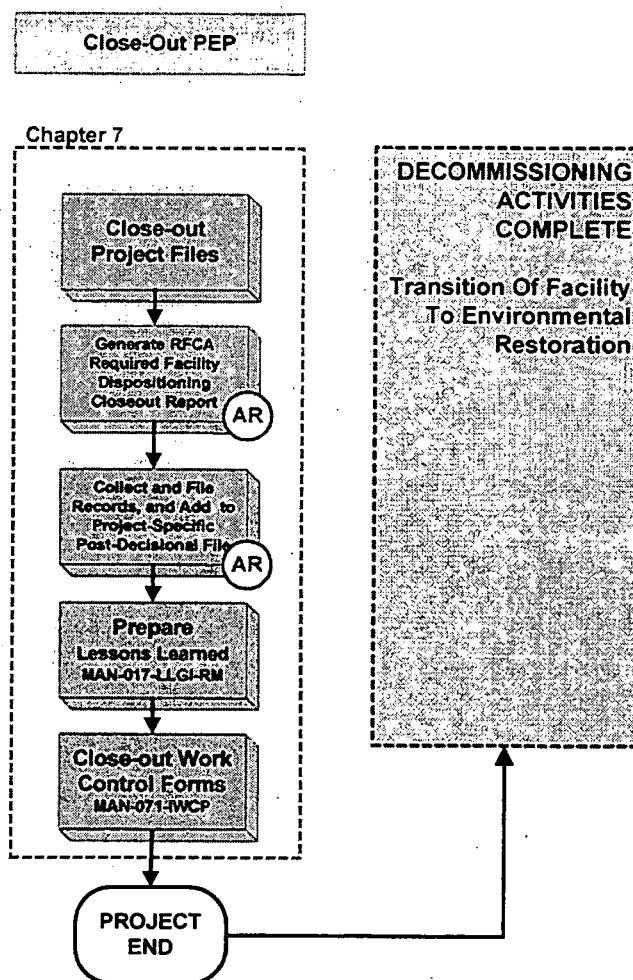
Project close-out tasks are completed as applicable for projects that are canceled prior to completion of the full scope or work. Execution of project close-out, including acceptance testing and final documentation **SHALL** be budgeted, scheduled, and managed as a specific project activity.

### 7.3.2 PROJECT FILES

For all facility disposition projects and construction projects, an official and permanent project file **SHALL** be established and maintained by the PM at project initiation. The project file **SHALL** be properly identified, protected, transmitted, distributed, retained, retrieved, maintained, and dispositioned per the Site's Document Control requirements. Subcontractors *may* choose to develop their own project documentation infrastructure, e.g. procedures or desk instructions, or they *may* use the approved K-H documentation control infrastructure. If a subcontractor chooses to develop their own project documentation infrastructure for facility disposition or assigned construction projects, it **SHALL** conform to the requirements of this manual and be approved by the D&D Division Manager, or designee, in writing.

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Figure 7-1  
PROJECT CLOSE-OUT  
PROCESS FLOW DIAGRAM



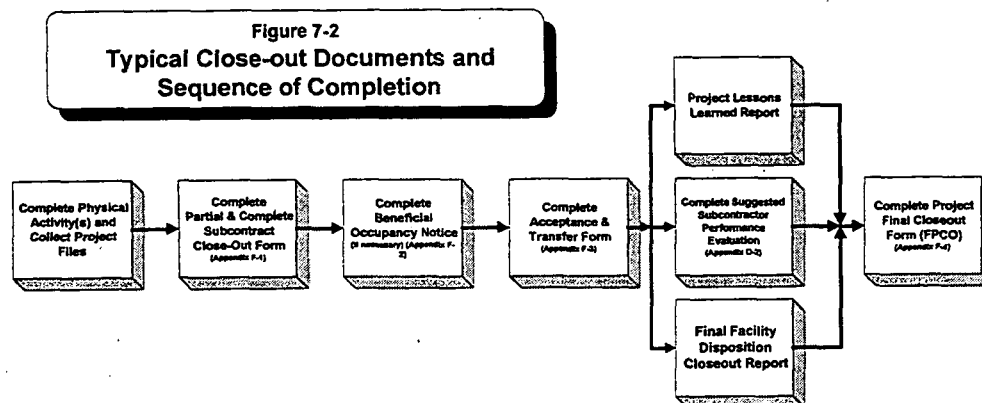
The PM **SHALL** ensure that all project records are complete, current, retained, accepted, and closed out in a manner that meets Site document control requirements. Project files are subject to review and assessment by K-H and DOE at any time. For each project, specific acceptance and close-out activities and documentation **SHALL** be defined and executed to ensure acceptable completion of the work scope, complete and auditable documentation, and complete subcontract and financial closure.

Appendix A-1 provides a project file numbering system that standardizes the method used to help organize and maintain project files and records.

### 7.3.3 FINAL PROJECT CLOSEOUT REPORTS AND DOCUMENTATION

Figure 7-2 provides an overview of the sequence of project closeout documentation. For facility disposition and/or construction projects, the following **SHALL** be completed as part of final project close-out:

- Partial And Complete Subcontract Close-Out Form (*Appendix F-1*)
- Project Beneficial Occupancy Notice (*Appendix F-2*)
- Project Acceptance And Transfer Form (*Appendix F-3*)
- Suggested Subcontractor Performance Evaluation (*Appendix D-2*)
- Project Final Closeout Form (FPCO) (*Appendix F-5*)
- Project Lessons Learned Report
- Final Facility Disposition Closeout Report



#### 7.3.3.1 Partial/Complete Subcontract Closeout Report

The Partial/Complete Subcontract Closeout documentation provides for the partial or complete "financial" close-out of a task or the project. It provides a mechanism for allowing disbursement of funds for partial or fully completed tasks. An example of the Partial/Complete Subcontract Closeout documentation is shown in Appendix F-1.

#### 7.3.3.2 Beneficial Occupancy Notice (BON)

The BON document is used to certify that the facility is serviceable for its intended use and is, therefore, "substantially complete". It allows for occupation of the facility, however, there may be some restrictions. Any restrictions are to be identified and placed in writing. Accompanying the BON must be a punch list of remaining activities to be completed, a schedule for completion, and a cost estimate to complete the punch list. See Appendix F-2.

#### 7.3.3.3 Project Acceptance and Transfer (PA&T)

Following completion of all activities, including any punchlist items and final inspection of the project, the PA&T associated with the contract plans and specifications, are verified complete and in compliance to the documents. The system, facility, etc., is accepted and transferred, as appropriate, to the new landlord/owner. An example of the PA&T is provided in Appendix F-3. To obtain the current PA&T form the project should go to Construction Closeout, 17C-COEM-CMG-417.

#### 7.3.3.4 Suggested Subcontractor Performance Evaluation

An evaluation of the Subcontractor's performance is performed at the completion of the project. The purpose of this evaluation process is to determine the suitability of the general Subcontractor or lower tier Subcontractor for future contracts. It is recommended that the Suggested Subcontractor Performance Evaluation model shown in Appendix D-2 be used to evaluate subcontractor/vendor performance. The Suggested Subcontractor Performance Evaluation **SHALL** be distributed to the project file, K-H Procurement, K-H Procurement Quality Assurance, and to other interested Site organizations as appropriate and upon request. The suggested Subcontractor Performance Evaluation is provided in Appendix D-2.

#### 7.3.3.5 Final Project Closeout Form (FPCO)

An example of the FPCO is provided in Appendix F-4. The FPCO is used to verify the following:

- Subcontractors redline drawings are complete and in accordance with the designed scope of work and include all approved filed charges. Red-lined drawings have been received from the sub-contractor.
- All applicable subcontracts have been accepted as complete, the design and construction management files have been consolidated into the project files and indexed in accordance with the Project File Index/Records Checklist, and a lessons learned letter has been provided to the Closeout Manager for reference on future similar projects, if applicable.
- Ownership of equipment, systems, structures, and components have been transferred to the permanent property custodian, and the project files are ready to be archived.

#### 7.3.3.6 Lessons Learned Report

At completion of a facility disposition or construction project, the PM **SHALL** prepare, and submit for record, a Project Lessons Learned Summary Report. Lessons learned include; 1) a good practice or innovative approach that is captured and shared to promote repeat application, or 2) an adverse work practice or experience that is captured and shared to avoid recurrence. To determine if lessons learned should be shared, consider the potential for this deficiency, event, adverse condition or safety issue to exist in, or to affect other buildings, operations, activities or organizations. If the potential exists, the lessons should be shared.

#### 7.3.3.7 Decommissioning Final Closeout Report and Documentation

A Decommissioning Closeout Report will be prepared for all decommissioning actions when work and relevant final characterization is completed. The report will consist of a brief description of the work that was completed, including: 1) any modifications to the original

decision document; 2) final sampling and analysis report(s); 3) a description of the quantity of remediation and process wastes produced and; 4) a statement, if true, that there were no releases to the environment due to the execution of the project or, if not true, description of the release and the response taken.

The report will state whether, as of the date of the closeout report, the accelerated work is complete. The complexity of the Decommissioning Closeout Report and the level of detail will reflect the scope and duration of the action. An example outline is shown below:

- Introduction
- Action description, document project activities
- Verification that action goals were met
- Verification of treatment process (if applicable)
- Radiological analysis (if applicable)
- Demolition survey results
- Waste stream disposition
- Deviations from the decision document
- Description of site condition at the end of decommissioning (e.g., slab, basement, etc.)
- Demarcation of excavation (if applicable)
- Demarcation of wastes left in place
- Dates and duration of specific activities (approximate)
- Final disposition of wastes (actual or anticipated)
- Next steps for the area (e.g., decommissioning is complete; facility demolished or ready for reuse; interim monitoring, if required; or transferred to ER Program for any additional action, if required).

A decommissioning closeout report will be prepared for all building decommissioning projects. Only the decommissioning closeout reports for Type 2 and 3 building decommissioning projects will be submitted to the agencies. The DPP requires that upon completion of the relevant final characterization (final status survey), DOE will notify CDPHE, EPA and the public in writing of the completion of decommissioning for a building or group of buildings. DOE will accomplish notification to the public with a letter to the Rocky Flats Citizen Advisory Board. This requirement may be achieved by providing the Rocky Flats Citizens Advisory Board with a copy of the Closeout Report transmittal letter which is provided to the appropriate agencies.



PROJECT CLOSE-OUT CHECKLIST			
Project:		Project Manager:	
Activity	Exemption from D&D Division Manager	Date Completed	Signature
1. Complete File Index Completion Checklist. (FDPM, 7.3.2)			
2. Complete Partial/Complete Subcontract Closeout Report. (FDPM, 7.3.3.1)			
3. Complete Beneficial Occupancy Notice. (FDPM, 7.3.3.2)			
4. Complete Project Acceptance and Transfer. (FDPM, 7.3.3.3)			
5. Complete subcontractor's performance evaluation. (FDPM, 7.3.3.4)			
6. Complete final project closeout form. (FDPM, 7.3.3.5)			
7. Complete lessons learned report. (FDPM, 7.3.3.6)			
8. Prepare Decommissioning final closeout report and documentation and have it review in accordance with the document review matrix in Appendix A-3 of the FDPM. (FDPM, 7.3.3.7)			

Checklist Complete:

\_\_\_\_\_  
Kaiser-Hill Project Manager (print/sign)

\_\_\_\_\_  
Date

Approval of Project Close-out:

\_\_\_\_\_  
Kaiser-Hill D&D Division Manager (print/sign)

\_\_\_\_\_  
Date

## 8.0 REFERENCES

CERCLA Administrative Records Program, 1-F78-ER-ARP-001  
CERCLA Comprehensive Environmental Responsibility Compensation and Liability Act  
Closure Project Baseline  
Colorado Air Quality Control Commission Reg. 8, Control of Hazardous Air Pollutants, SCCR-1001-10  
Colorado Hazardous Waste Act (CHWA)  
Conduct of Operations Manual, MAN-066-COOP  
Construction Closeout, 17C-COEM-CMG-417  
Correspondence Control Program, 1-11000-ADM-003  
Davis-Bacon Process, 1-90000-ADM-9.05  
Decommissioning Program Plan (DPP) (dated October 8, 1998 and approved November 12, 1998)  
Decontamination and Decommissioning Characterization Protocol Manual, MAN-077-DDCP  
Hazard Baseline Documentation, DOE-EM-STD-5502-94  
Hazard Categorization and Accident Analysis Techniques, DOE-STD-1027-92  
Hazardous Waste Operations and Emergency Response, 29 CFR 1910.120  
Hazardous Waste Requirements Manual, 1-10000 HWR  
Health and Safety Practices Manual  
Independent Review Committee, 1-52000-ADM-02.01  
Integrated Safety Management System Manual, 1-MAN-016-ISM  
Integrated Work Control Program Manual, MAN-071-IWCP  
Low Level Waste Management Plan, 94-RWP/EWQA-0014  
Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) Guidelines  
Nuclear Safety Analysis Reports, DOE Order 5480.23  
Nuclear Safety Manual, 1-MAN-018-NSM  
Occupational Radiation Protection, 10 CFR 835  
Occupational Safety and Industrial Hygiene Program Manual, MAN-072-OS&IH PM  
Property Management Manual (PMM), 1-MAN-009-PMM  
Radiological Control Manual (Site RCM)  
Readiness Determination Manual, 1-MAN-04-RDM  
Records Management Guidance for Records Sources, 1-V41-RM-001  
Real Property Transition Procedure, 1-PRO-209-RPTP  
Resource Conservation and Recovery Act (RCRA)  
Rocky Flats Cleanup Agreement (RFCA), July 19, 1996  
Rocky Flats Dictionary  
Safety Analysis and Risk Assessment Handbook (SARAH), NSTR-RFP-5098  
Safety Evaluation Screen, 1-C10-NSM-04.03  
Site Engineering Requirements Manual, MAN-027-SERM  
Site Lessons Learned Generic Implications Requirements Manual, 1-MAN-017-LLGI-RM  
Site Quality Assurance Program (SQAP)  
SSOC Unreviewed Safety Question Process, 3-X97-SSOC-USPQ1  
Training Users Manual, 96-RF/T&Q-003  
Transportation Manual  
Transuranic (TRU) Waste Management Manual, 1-MAN-008-WM-001  
TSCA Management Plan  
Unreviewed Safety Question Determination, 1-C11-NSM-04.05

**Appendix A**

- A-1 Generic DD Projects File Index and Completion Checklist
- A-2 Project Deliverables Matrix
- A-3 D&D Document Review

**Appendix B**

- B-1 Type 1 Facility Disposition Checklist
- B-2 Listing of Facilities by "Anticipated" Type

**Appendix C**

- C-1 Project Execution Plan (PEP) Template
- C-2 Waste Management Plan Format
- C-3 Daily Construction Report
- C-4 Monthly Personnel Resource Usage Report
- C-5 Construction Progress Photographs

**Appendix D**

- D-1 Statement of Work
- D-2 Instructions for Construction Subcontractor Pool Application and Application for Pre-Qualification, Subcontractor Evaluation
- D-3 Decision Document Guidance
- D-4 Decision Document Template

**Appendix E**

- E-1 Core Training Requirements D&D Worker

**Appendix F**

- F-1 Partial And Complete Subcontract Close-Out Form
- F-2 Project Beneficial Occupancy Notice
- F-3 Project Acceptance And Transfer Form
- F-4 Project Final Closeout Form (FPCO)

**Appendix G**

- G Glossary & Acronyms

09/24/99

APPENDIX A-1 - GENERIC D&D PROJECT FILE INDEX AND COMPLETION CHECKLIST

APPENDIX A-1  
Generic D&D Project File Index And Completion Checklist

Building Number/Complex Number/Project Number					AR	Project File #	QA Record*	File Completed Date/Init
Major Category								
Sub-Category								
Individual Category								
DESCRIPTION								
#####	00.	00.	00	FILE INDEX				
#####	01.	00.	00	ADMINISTRATIVE				
#####	01.	01.	00	File Maintenance/Records Management				
#####	01.	02.	00	Administrative	X			
#####	01.	03.	00	Letters of Appointment/Delegation				
#####	01.	04.	00	Moves/Space				
#####	01.	05.	00	Telephone Control Usage Reports				
#####	01.	06.	00	Website Information				
#####	01.	07.	00	Human Resources				
#####	02.	00.	00	SAFETY/INDUSTRIAL HYGIENE				
#####	02.	01.	00	Safety Meeting		H-14		
#####	02.	01.	01	Technical Support		H-14		
#####	02.	01.	02	D&D		H-14		
#####	02.	01.	03	Operations Support		H-14		
#####	02.	01.	04	Maintenance/SOEs		H-14		
#####	02.	01.	05	Management/PSO/WM		H-14		
#####	02.	02.	00	Reading Required Program		H-14		
#####	02.	03.	00	Safety/Industrial Hygiene Deliverables		H-14		
#####	02.	03.	01	Asbestos Abatement Plan (may be part of RLCP)		H-14	X	
#####	02.	03.	02	Asbestos Characterization Report		H-14	X	
#####	02.	03.	03	Asbestos Notification		H-14	X	
#####	02.	03.	04	Chronic Beryllium Disease Prevention Plan		H-14	X	
#####	02.	03.	05	Integrated Job Hazard Analysis		H-14	X	
#####	02.	03.	06	Lead Abatement Plan (may be part of RLCP)		H-14	X	
#####	02.	03.	07	Lead Characterization Report (may be part of RLCP)		H-14	X	
#####	02.	03.	08	Project Specific Health and Safety Plan (may be part of PEP)		H-14	X	
#####	02.	03.	09	Soil Disturbance Permit and Surveys		H-14	X	
#####	02.	03.	10	Criticality Safety Assessment		D-12	X	
#####	02.	04.	00	Surveys		H-14	X	
#####	02.	04.	01	Lighting Survey		H-14	X	

Building Number/Complex Number/Project Number						AR	Project File #	QA Record*	File Completed Date/Init
	Major Category								
		Sub-Category							
			Individual Category						
				DESCRIPTION					
#####	02.	04.	02		Noise Survey		H-14	X	
#####	02.	04.	03		Pre-Demolition Survey Results		H-14	X	
#####	02.	04.	04		Post-Demolition Survey Results		H-14	X	
#####	03.	00.	00	QUALITY					
#####	03.	01.	00		Lessons Learned			X	
#####	03.	01.	01		Rosters		I-5		
#####	03.	01.	02		Lessons Learned Summary Report		A-6	X	
#####	03.	02.	00		Receiving Inspections		H-5	X	
#####	03.	03.	00		Nonconformance Reports		H-3	X	
#####	03.	04.	00		Calibration Records			X	
#####	03.	05.	00		Corrective Action Reports		I-4	X	
#####	03.	06.	00		Audit Report		I-4	X	
#####	03.	07.	00		Management Assessment Reports		I-4	X	
#####	04.	00.	00	PROJECT DOCUMENTATION					
#####	04.	01.	00		Presentations to K-H/DOE		A-5		
#####	04.	01.	01		Presentations to RMRS/SSOC		A-5		
#####	04.	02.	00		DOE/K-H Correspondence		C-1	X	
#####	04.	02.	00		External Correspondence (EPA/CDPHE/Stakeholders)		C-5	X	
#####	04.	03.	00		Project Schedules		F-1		
#####	04.	04.	00		Project Organization		A-1		
#####	04.	04.	01		Transmittal of Project Organization to CDPHE		A-1		
#####	04.	05.	00		Project Decision Letters		B-5		
#####	04.	05.	01		Reduction of Access Letter		B-5	X	
#####	04.	05.	02		Notification Letter to DOE for readiness for ERE		J-5	X	
#####	04.	05.	03		Notification to State prior to Demolition	X	J-5	X	
#####	04.	05.	04		ERE Approval letter from DOE		J-10	X	
#####	04.	06.	00		Status Briefings				
#####	04.	07.	00		Project Planning				
#####	04.	08.	00		Decommissioning Final Closeout Report	X	J-15	X	
#####	04.	08.	01		Pre-Demolition Survey	X	J-11	X	
#####	04.	08.	02		Post-Demolition Survey	X	J-15	X	
#####	04.	09.	00		As-builts		D-11	X	
#####	04.	10	00		Building Photographs		H-16	X	

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APPENDIX A-1 - GENERIC D&D PROJECT FILE INDEX AND COMPLETION CHECKLIST

Building Number/Complex Number/Project Number					AR	Project File #	QA Record*	File Completed Date/Init
	Major Category							
		Sub-Category						
			Individual Category					
				DESCRIPTION				
#####	05.	00.	00	COMPLIANCE PLANS				
#####	05.	01.	00	Project Execution Plan		B-6	X	
#####	05.	01.	01	Comments				
#####	05.	01.	02	Revisions				
#####	05.	02.	00	Scoping Level Characterization Plan			X	
#####	05.	02.	01	Scoping Level Checklists			X	
#####	05.	03.	00	Scoping Level Characterization Report			X	
#####	05.	03.	01	Joint Scoping Meeting Presentation				
#####	05.	03.	02	Joint Scoping Meeting Minutes	X		X	
#####	05.	04.	00	Reconnaissance Level Characterization Package	X		X	
#####	05.	04.	01	Comments/Background				
#####	05.	05.	00	Reconnaissance Level Characterization Report	X	J-4	X	
#####	05.	05.	01	Comments/Background				
#####	05.	06.	00	RCRA Closure Description Document	X	B-12	X	
#####	05.	06.	01	RCRA Closure Certification			X	
#####	05.	07.	00	Security Checklist/Plan		B-4	X	
#####	05.	07.	01	Decision Document		J-6	X	
#####	05.	07.	02	Internal Comments			X	
#####	05.	07.	03	Responsiveness Summary	X		X	
#####	05.	07.	04	Final Submittal	X		X	
#####	05.	08.	00	Chemical Inventory Report		B-12	X	
#####	05.	08.	01	Chemical Data Packages			X	
#####	05.	09.	00	Surface Water/Groundwater Monitoring Determination		B-12	X	
#####	05.	10.	00	Annual Emissions Results		B-12	X	
#####	05.	10.	01	Air Pollutant Emission Notification (APEN)	X		X	
#####	05.	11.	00	Environmental Checklist		B-3	X	
#####	05.	12.	00	Migratory Bird Clearance Request		B-12	X	
#####	06.	00.	00	AUTHORIZATION BASIS				
#####	06.	01.	00	Auditable Safety Assessment or Authorization Basis		D-12	X	
#####	06.	01.	01	Comments/History				
#####	06.	01.	02	Revisions			X	
#####	06.	02.	00	AB/ASA Implementation Plan		D-12	X	
#####	06.	03.	00	Safety Evaluation Screens		D-12	X	
#####	06.	04.	00	Unreviewed Safety Questions		D-12	X	

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Building Number/Complex Number/Project Number					AR	Project File #	QA Record*	File Completed Date/Init
Major Category								
Sub-Category								
Individual Category								
DESCRIPTION								
#####	06.	05.	00	Justification for Continued Operations		D-12	X	
#####	07.	00.	00	PROPERTY MANAGEMENT				
#####	07.	01.	00	4300.1C Checklist			X	
#####	07.	02.	00	Material Transfer and Disposal Form(s)			X	
#####	07.	03.	00	Transfer of Cluster from Operations to Decommissioning			X	
#####	08.	00.	00	OPERATIONS				
#####	08.	01.	00	Project Performance Report(s)				
#####	08.	02.	00	Construction Redlines		H-10	X	
#####	08.	03.	00	Construction Work in Progress Report(s)				
#####	08.	04.	00	Activity Screening Form(s)				
#####	08.	05.	00	Daily Construction Reports		H-2		
#####	08.	06.	00	Monthly Personnel Resources Usage Report				
#####	08.	07.	00	Project Final Closeout Form		B-9	X	
#####	08.	08.	00	Project Acceptance & Transfer		H-18	X	
#####	08.	09.	00	Project Beneficial Occupancy Form		H-6	X	
#####	09.	00.	00	PROCUREMENT				
#####	09.	01.	00	Purchase Orders/Requisitions		G-5	X	
#####	09.	01.	01	Credit Card Purchases				
#####	09.	01.	02	Credit Card Reconciliation Sheets				
#####	09.	02.	00	Bid Evaluations		G-4		
#####	09.	02.	01	Estimates				
#####	09.	03.	00	Procurement Report		G-1		
#####	09.	04.	00	Davis-Bacon Submittal and Determination		B-7		
#####	09.	05.	00	Subcontractor Performance Evaluation		H-15	X	
#####	09.	06.	00	Partial and Complete Subcontractor Close-out Form				
#####	10.	00.	00	BUDGET/COST/ESTIMATING				
#####	10.	01.	00	Weekly Estimating Sheets				
#####	10.	02.	00	Closure Projects Budget Baseline Update		B-2		
#####	10.	03.	00	Monthly Project Summary Report (PSR)		I-2		
#####	10.	04.	00	Budget		B-2		
#####	10.	04.	01	File by Fiscal year				
#####	10.	05.	00	Accrual Report				
#####	10.	06.	00	Baseline Change Proposal(s)		B-8		

Building Number/Complex Number/Project Number					AR	Project File #	QA Record*	File Completed Date/Init	
	Major Category								
		Sub-Category							
			Individual Category						
				DESCRIPTION					
#####	10.	07.	00		Monthly MCS Reports/Variances		I-1		
#####	10.	08.	00		Performance Measure Completion Report				
#####	10.	09.	00		Overtime Requirements/Requests				
#####	11.	00.	00		SUBCONTRACTOR PLANNING DOCUMENTATION				
#####	11.	01.	00		Asbestos Abatement Contract			X	
#####	11.	01.	01		Asbestos Abatement MOU			X	
#####	11.	01.	02		Asbestos Abatement SOW		G-3	X	
#####	11.	02.	00		Demolition				
#####	11.	02.	01		Demolition SOW		G-3	X	
#####	11.	02.	01.	01	Background and Comment Resolution				
#####	11.	02.	02.		Subcontractor Project Documentation				
#####	11.	02.	02.	01	Subcontractor Health and Safety Program Plan				
#####	11.	02.	02.	02	Subcontractor Quality Assurance Program Plan				
#####	11.	02.	02.	03	Spill Control Plan			X	
#####	11.	02.	02.	04	Readiness Certificate Memorandum		J-9	X	
#####	11.	02.	02.	05	Plan of Action			X	
#####	11.	02.	02.	06	Demolition Plan and notification	X		X	
#####	11.	02.	02.	07	Demolition Closeout Report			X	
#####	11.	02.	02.	08	Dust Control Plan			X	
#####	11.	02.	02.	09	Communication and Requests		H-11	X	
#####	11.	02.	02.	10	Status Meetings				
#####	11.	02.	02.	11	Field Changes		H-4	X	
#####	11.	02.	02.	12	Project Schedules		F-3		
#####	11.	02.	02.	13	Miscellaneous			X	
#####	12.	00.	00		TRAINING				
#####	12.	01.	00		Training Matrix			X	
#####	12.	02.	00		Qualification Packages			X	
#####	12.	03.	00		Individual Field Training Records			X	
#####	12.	03.	01		Personnel not with project			X	
#####	12.	03.	02		Subcontractor personnel			X	
#####	13.	00.	00		WASTE MANAGEMENT				
#####	13.	01.	00		WSRIC/WGI			X	
#####	13.	02.	00		Waste Travelers for Packaging			X	



Building Number/Complex Number/Project Number					AR	Project File #	QA Record*	File Completed Date/Init
	Major Category							
		Sub-Category						
			Individual Category					
				DESCRIPTION				
#####	13.	03.	00	Nonconformance Reports			X	
#####	14.	00.	00.	ENGINEERING				
#####	14.	01.	00	Engineering Assessments and Feasibility Reports		D-8	X	
#####	14.	02.	00	Engineering Design Packages		D-9	X	
#####	14.	03.	00	Engineering Change Requests		D-7	X	
#####	14.	04.	00	Integrated Work Control Program Work Packages		H-19	X	

Project Files Complete: \_\_\_\_\_

APPENDIX A-2  
Project Deliverables Matrix

Document	Phase	Building Application	Owner Organizations	Deliverable	Driving Document	Implementing Document	DOE Interface	LRA Interface*	Admin. Record	Comments
1	All	All	DD	Project Execution Plan (PEP)	FDPM-Section 2.3.1	FDPM-Section 2.3.1	Approval	N/A		Template is in Appendix C-1 of FDPM
2	All	All	DD	Project Performance Report	FDPM-Section 2.3.6	N/A	N/A	N/A		Prepared monthly by K-H PM
3	All	All	DD	Accrual Report	FDPM-Section 2.3.6	N/A	N/A	N/A		Prepared monthly by K-H PM
4	All	All	DD	Procurement Report	FDPM-Section 6.3.6	N/A	N/A	N/A		
5	All	All	DD	Construction Work In Progress Report	FDPM-Section 6.3.6	N/A	N/A	N/A		
6	All	All	OS&IH	Integrated Job Hazard Analysis (AHA, ASA, JHA, JSA, etc.)	DOE O 440.1, OSHA	HSP, IWCP, OS&IH Manual	Information	N/A		
7	I		DD	Reduction of Access Letter	N/A	N/A	Approval	N/A		Letter from K-H to DOE, requesting a modification of security, applies to buildings in the PA that want unescorted access
8	I	All	DD	Project Team Organization Structure and responsibilities: Letter to CDPHE	DPP, Sections 1.1.1 and 3.3.7.1	DPP	Information	Information		Information exchange of the key points of contact
9	I	All	DD	Update Closure Projects Budget Baseline	BMI-INST-004, Baseline Change Control	FDPM-Section 3.3.1.2	N/A	N/A		
10	I	All	DD	Activity Screening Form	MAN-071-IWCP, IWCP Manual	FDPM-Section 3.3.6.1	N/A	N/A		
11	I	All	DD	Work Control Form	MAN-071-IWCP, IWCP Manual	FDPM-Section 3.3.1.3	N/A	N/A		
12	I	All	DD	Scoping-level Characterization Plan	DDCP	DDCP	N/A	N/A		Plan is recommended, but not required
13	I	All	DD	Scoping-level Characterization Report	DDCP	DDCP	N/A	N/A		Report is recommended, but not required
14	I	All	DD	Joint Scoping Meeting Minutes/Disposition	FDPM-Section 3.3.7	1-11000-ADM-003, Correspondence Control Program	Concur	Concur	X	
15	I	All	DD	Scoping Level Checklists	DDCP	DDCP	N/A	N/A		Checklists are recommended, but not required
16	I	All	DD	Joint Scoping Meeting Presentation	FDPM-Section 3.3.7	N/A	N/A	N/A		Presentation is recommended, but not required

Phase of Project: I = Scoping; II = Phase I Planning; III = Phase II Planning and Engineering; IV = Execution; and V = Close-out

\*LRA for Industrial Area is State with EPA as SRA and LRA for Buffer Zone is EPA with State as SRA

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Document	Phase	Building Application	Owner Organizations	Deliverable	Driving Document	Implementing Document	DOE Interface	LRA Interface*	Admin. Record	Comments
17	I	All	ESS	Environmental Checklist	DOE-STD-3006-95	1-25000-EPR-NEPA.001, Implementation of NEPA Documentation	Approval	N/A		Prepared by the project and reviewed by the ESS group. Additional documentation may result from the checklist, but it will be developed by the ESS group
18	I	All	ESS	Migratory Bird Clearance Request	Migratory Bird Treaty Act	N/A	N/A	N/A		Not a document, an evaluation will be made by Ecology and NEPA to determine if nests need to be removed prior to initiating work, clearance is good for two weeks
19	I		Env	Chemical Data Package	Chemical Compliance Order	Acceptance Criteria	N/A	N/A		Required as chemicals are found or are no longer needed. Package needs to contain MSDS, chemical name, and sample results to meet the acceptance criteria
20	I	All	Env	Chemical Inventory Report	OSHA, RCRA	Hazardous Communications Program	Information	Information		All chemicals in use and/or on-site must be maintained on a list
21	I		Env.	Air/Soil/Ecology/Surface Water/Groundwater Monitoring Determination	RFCA, Paragraph 267	N/A	Information	Information		An assessment will need to be made by Environmental to determine if monitoring will be necessary for the project per the Integrated Monitoring Plan
22	I	All	P&I	Baseline Change Proposal(s)	1-R97-F&A-MCS-001, Management and Control	P&I Standard	Approve	N/A		
23	I	All	P&I	Monthly MCS Reports/VARS	1-R97-F&A-MCS-001, Management and Control	P&I Standard 122	Information	N/A		
24	I	All	P&I	Monthly Project Summary Report (PSR)	1-R97-F&A-MCS-001, Management and Control	P&I Standard 006	Information	N/A		
25	I	All	P&I	Performance Measure Completion Report	1-R97-F&A-MCS-001, Management and Control	P&I Standard 121	Approve	N/A		
26	I	All	PU&D	Transfer of Cluster from Operations to Decommissioning	41 CFR 109	1-MAN-009-PMM, Real Property Management, Ch. 9	N/A	N/A		Present Landlord and DD PM meet with property management to complete hazards assessment and facility status
27	I	II, III	Reg	Establish Administrative Record	RFCA, Para. 283, 284 and 285; CERCLA, 40CFR300.800 et seq.	1-F78-ER-ARP.001, CERCLA Administrative Record	Approval	Approval	X	

Phase of Project: I = Scoping; II = Phase I Planning; III = Phase II Planning and Engineering; IV = Execution; and V = Close-out

\*LRA for Industrial Area is State with EPA as SRA and LRA for Buffer Zone is EPA with State as SRA

Document	Phase	Building Application	Owner Organizations	Deliverable	Driving Document	Implementing Document	DOE Interface	LRA Interface*	Admin. Record	Comments
28	II	All	Contractors	Davis-Bacon Submittal & Determination	Davis Bacon Act	1-90000-ADM-9.05, Davis Bacon Process, FDPM-Section 4.3.1.3	N/A	N/A		
29	II	All	DD	Reconnaissance Level Characterization Package	Site-wide RLCP	Site-wide RLCP	N/A	N/A	X	
30	II	All	DD	Reconnaissance Level Characterization Report (RLCR)	RFCA-Paragraph 120(g)	DPP-Section 3.3.2.2, Site-wide RLCP	Approval	Concurrence	X	
31	II	All	Eng	Engineering Assessments and Feasibility Reports	SERM	FDPM-Section 4.3.1.1	N/A	N/A		May or may not be required dependent on the scope and characterization
32	II		Env	RCRA Closure Description Document	RFETS Part B Permit; RFCA, Attachment 10	RFETS Part B Permit; RFCA, Attachment 10	Approval	Approval	X	Only required if there are RCRA units and a plan may already be in place. If not, a CDD can be prepared with assistance from Environmental or the CDD can be incorporated into the Decision Document, goes into AR only if RCRA closure addressed in Decision D
33	II		OS&IH	Asbestos Abatement Plan	DOE O 440.1, OSHA	OS&IH Manual, Contract Specifications	N/A	N/A		Plan includes characterization process and may be included in RLCP, only required when asbestos may be present
34	II		OS&IH	Chronic Beryllium Disease Prevention Plan	DOE N 440.1, 10 CFR 850	OS&IH Manual, Contract Specifications	N/A	N/A		Plan only needs to be prepared if Beryllium may be present
35	II	All	OS&IH	Subcontractor Health & Safety Program	DOE O 440.1, OSHA	Contract Specifications	N/A	N/A		Prior to awarding a subcontract the HS Dept. must review and approve the subcontractor's H&S Program. If a sub is chosen from the approved subcontractors list, the program has been reviewed
36	II	All	OS&IH	Project Specific Health and Safety Plan	DOE O 440.1, OSHA	OS&IH Manual, Contract Specification 01010	N/A	N/A		Not necessarily a separate document can be a section or attachment to PEP.
37	II		OS&IH	Spill Control Plan	DOE O 440.1, OSHA	Contract Documentation	Approval	Approval		Developed by the subcontractor if its required by the scope
38	II	All	PU&D	4300.1C Checklist	DOE Order 4300.1C	1-MAN-009-PMM, Property Management Manual	N/A	N/A		Completion of the checklist should be coordinated with real property manager
39	II	All	QA	Subcontractor Quality Program	10 CFR 830.120, DOE O 5700.6C, QAPD, Crit. 1	1-W36-ARP-111, Acquisition Procedures for Requisitioning Services and Commodities	N/A	N/A		Scope of the plan will depend on the services rendered and the specifics of the subcontracts. Subcontractors from the approved subcontractor list will have an established QA program

Phase of Project: I = Scoping; II = Phase I Planning; III = Phase II Planning and Engineering; IV = Execution; and V = Close-out

\*LRA for Industrial Area is State with EPA as SRA and LRA for Buffer Zone is EPA with State as SRA

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Document	Phase	Building Application	Owner Organizations	Deliverable	Driving Document	Implementing Document	DOE Interface	LRA Interface*	Admin. Record	Comments
40	II		Crit. Safety	Criticality Analysis Safety Assessment	DOE O 420.1	Nuclear Criticality Safety Manual	N/A	N/A		Only required if task involves fissile material
41	II	All	Security	Security Checklist/Plan	DOE O 470.1	1-MAN-026, Security Manual	N/A	N/A		Complete Part I of checklist in Appendix 4 of 2-L92-COEM-PMG-302. A response to Part II will be completed within one month which may require the development of a Security Plan
42	III	II, III	DD	Decision Document	RFCA	DPP-Section 3.3.7.1, FDP-Section 5.3.5, PEP	Coordination	Approval	X	Appendices D-3 and D-4 of FDPM have guidance, A PAM or IM/IRA for Type II and a DOP for Type III
43	III	II, III	DD	Decision Document Responsiveness Summary	RFCA	N/A	Coordination	Approval	X	Summary will contain comments/responses to public comments received during the public comment period (may include Type II in a DOP). State/EPA/DOE et. al. comments will be incorporated as the document is prepared in a coordinated fashion
44	III	All	DD	Training Matrix	DOE O 5480.20A; Training Users Manual; QAPD, Crit. 2	DPP Section 1.1.1 and 3.3.7.1, FDP-Appendix E-1	N/A	N/A		Each building should have an established matrix which could be modified/updated for use by the D&D project team
45	III	All	Eng	Engineering Design Packages	SERM	COEM DES 210	N/A	N/A		
46	III	All	Eng	Integrated Work Control Program (IWCP) Work Packages	DOE O 5700.6C, 4330.4B, 5480.19, P450.4 & C420.1	IWCP Manual FDP-Section 5.3.1.1	N/A	N/A		
47	III		Nuc Saf	Safety Evaluation Screens (SES)/ Unreviewed Safety Questions (USQs)	1-MAN-018-NSM, Nuclear Safety Manual; MAN-066-COOP, COOP	1-C11-NSM-04.05, Unreviewed Safety Question Determination; FDP-Section 5.3.4	N/A	N/A		A SES can be done for less complicated issues. An USQ be prepared in conjunction with JCO in lieu of modifying the AB
48	III		Nuc. Saf.	Auditable Safety Assessments	DOE O 5481.1B	MAN-066-COOP; FDP-Section 5.3.4	Information	Information		Document will need to be prepared for nonnuclear facilities, and will be prepared by RMRS with input from DD project
49	III		Nuc. Saf.	Authorization Basis for Decommissioning	DOE O 5480.23	MAN-066-COOP; FDP-Section 5.3.4	Approval	Information		The JCO/USQ process can be used for each activity instead of modifying the AB, AB will be modified by RMRS with input from project
50	III		Nuc. Saf.	AB/ASA Implementation Plan	DOE O 5481.1B (non-nuc.) & 5480.23 (nuc)	MAN-066-COOP; FDP-Section 5.3.4	Information-Nuclear	N/A		Document implementation of the AB changes or the ASA prepared at the discretion of the Facility Manager

Phase of Project: I = Scoping; II = Phase I Planning; III = Phase II Planning and Engineering; IV = Execution; and V = Close-out

\*LRA for Industrial Area is State with EPA as SRA and LRA for Buffer Zone is EPA with State as SRA

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Document	Phase	Building Application	Owner Organizations	Deliverable	Driving Document	Implementing Document	DOE Interface	LRA Interface*	Admin. Record	Comments
51	III		Nuc. Saf.	Justification for Continued Operation (JCO)	1-MAN-018-NSM, Nuclear Safety Manual; MAN-066-COOP, COOP	FDPM-Section 5.3.4	N/A	N/A		Can be used in conjunction with USQD instead of revising AB
52	III, IV		Eng	Engineering Change Request (ECR)	SERM	COEM DES 210, IWCP Manual	N/A	N/A		
53	IV	II, III	CPEI	Readiness Certificate Memorandum	1-MAN-040-RDM Readiness Determination Manual	FDPM-Section 6.3.1	Information	N/A		Prepared by Principal Subcontractor
54	IV	II, III	CPEI	Plan of Action	DOE O 3006-95 and 425.1	1-MAN-040-RDM Readiness Determination Manual	Information	N/A		Prepared by Principal Subcontractor, recommended for all and required for types II and III
55	IV	All	CSS	Inspection Reports/Acceptance Criteria	1-PRO-072-001, Inspection and Acceptance Test Process	IWCP Manual	N/A	N/A		Each subcontractor may also have established inspection requirements contained within their programs; inspections are documented in the IWCP process
56	IV	All	DD	Daily Construction Reports	COEM Vol. 4	FDPM-Section 6.3.6	N/A	N/A		Appendix C-3 of FDPM has template, level-of-effort task
57	IV		DD	Demolition Plan	OSHA	N/A	Information	Notification	X	Prepared by Principal Subcontractor
58	IV	All	DD	Demolition Closeout Report	FDPM-Section 6.3.4	N/A	Approval	N/A		Prepared by Principal Subcontractor
59	IV		DD	Notification letter to DOE for readiness for ERE	N/A	N/A	Review	N/A		Letter is prepared by Steve Crowe's group, documentation will be evaluated and DD resources may be required
60	IV	II, III	DD	Pre-Demolition Survey	DPP Sections 3.3.10 and 3.3.13, CERCLA	DDCP Site-wide PDSP	Approval	Approval	X	Compilation of all surveys generated during building surface dismantlement
61	IV	All	DD	Demolition Notification to State	CAQCC Reg. No. 8, Section III.B.1.a)		Information	Information	X	Required for every demolition project
62	IV	All	DD	Construction Progress Photos	FDPM-Section 6.3.6	4-02C-COEM-CMG-402, Project Records Management	N/A	N/A		Level-of-effort task, close-out submittal; Photography request will need to be completed. Appendix C-5 has format.
63	IV	All	DD	Monthly Personnel Resource Usage Report	FDPM-Section 2.3.6	FDPM-Appendix C-4	N/A	N/A		Provide to D&D Office on the 5th working of the month
64	IV		DD	Dust Control Plan	CAQCC Regulation 1	N/A	N/A	Approval		Prepared by the Principal Subcontractor
65	IV	II, III	DOE	Environmental Readiness Evaluation (ERE)	DOE-STD-3006-95	2-C21-ER-ADM-18.03, Environmental Readiness Assessment	N/A	Information		Completed by DOE, depending on project hazards. Not a DD project team submittal, but will require resources from project team

Phase of Project: I = Scoping; II = Phase I Planning; III = Phase II Planning and Engineering; IV = Execution; and V = Close-out

\*LRA for Industrial Area is State with EPA as SRA and LRA for Buffer Zone is EPA with State as SRA

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APPENDIX A-2 - PROJECT DELIVERABLES MATRIX

Document	Phase	Building Application	Owner Organizations	Deliverable	Driving Document	Implementing Document	DOE Interface	LRA Interface*	Admin. Record	Comments
66	IV	II, III	DOE	Environmental Readiness Evaluation Approval (letter)	DOE-STD-3006-95	2-C21-ER-ADM-18.03, Environmental Readiness Assessment	N/A	N/A		Completed by DOE, depends on project hazards. Not a DD project team submittal, but will require resources from project team
67	IV	II, III	DOE	Technical Description Sheets	1-MAN-040-RDM, Readiness Determination Manual	FDPM-Section 6.3.1	Review	N/A		
68	IV	All	Eng	Construction Redlines	SERM	COEM AMN 101	N/A	N/A		
69	IV		Eng	Field Change Orders (FCO)	SERM	COEM DES 210 and AMN 101	N/A	N/A		
70	IV	All	Eng	As-Builts	SERM	COEM AMN 101	N/A	N/A		
71	IV		Env	RCRA Closure Certification	RFETS-Part B Permit; RFCA, Attachment 10	RFETS Part B Permit; RFCA, Attachment 10	Approval	Information		Only required if the closure action is not removal and some portion of the RCRA unit remains in place after DD
72	IV		Env.	Air Pollutant Emission Notification (APEN)	CAQCC Regulation 3	N/A	N/A	Information	X	Needs to be submitted to the State if 2,000 lbs. of dust/VOC emission will be exceeded in a single event
73	IV		Env.	Monitoring Data, annual emissions results	40 CFR 61, Subpart H; CAQCC Regulation 8	N/A	Information	Information		Submitted annually for incorporation into the RFETS Monitoring Report
74	IV		OS&H	Asbestos Notification	DOE O 440.1, OSHA	OS&H Manual, Contract Specifications	Information			The requirement is dependent upon the amount of asbestos involved in the D&D
75	IV		OS&H	Asbestos Characterization Report	DOE O 440.1, OSHA	OS&H Manual, Contract Specifications	N/A	N/A		Plan is prepared after asbestos abatement, only required when asbestos is present
76	IV		OS&H	Lead Abatement Characterization Plan and Report	DOE O 440.1, OSHA	OS&H Manual, Contract Specification 01010	N/A	N/A		May be included in RLCR, plan not required if regulatory limits are not exceeded
77	IV		OS&H	Soil Disturbance Permit and Surveys	DOE O 440.1, OSHA	4-04C-COEM-CMG-404, Excavations and Soil Disturbances	N/A	N/A		
78	IV	All	PU&D	Material Transfer and Disposal Form	41 CFR 109	1-MAN-009-PPMM, Property Management Manual	N/A	N/A		The forms will be provided by PU&D and will need to be completed and submitted for any personal property remaining in the building
79	IV	All	QA	Receiving Inspections	10 CFR 830.120, DOE O 5700.6C, QAPD, Crit. 8	4-J44-RC&I-6600	N/A	N/A		Each subcontractor may also have established inspection requirements contained within their programs; inspections are documented in the IWCP process

Phase of Project: I = Scoping; II = Phase I Planning; III = Phase II Planning and Engineering; IV = Execution; and V = Close-out  
\*LRA for Industrial Area is State with EPA as SRA and LRA for Buffer Zone is EPA with State as SRA

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Document	Phase	Building Application	Owner Organizations	Deliverable	Driving Document	Implementing Document	DOE Interface	LRA Interface*	Admin. Record	Comments
80	IV	All	QA	Nonconformance Reports	10 CFR 830.120, DOE O 5700.6C, QAPD, Crit. 3, MAN-091-NCR	PRO-U76-WC-4030, Control of Waste Nonconformances; MAN-091-NCR, Control of Nonconforming Items	N/A	N/A		Prepared on an as-needed basis during execution for hardware nonconformances; each subcontractor may also have procedures and programs governing NCRs
81	IV	All	QA	Calibration Records	10 CFR 830.120, DOE 5700.6C, QAPD, Crit. 8	1-I97-ADM-12.01, Control of Measuring and Testing Equipment	N/A	N/A		
82	IV	All	QA	Corrective Action Reports	10 CFR 830.120, DOE O 5700.6C, QAPD, Crit. 3	1-MAN-012-SCARM, Site Corrective Action Requirements Manual	N/A	N/A		Will need to be prepared to document programmatic deficiencies, if required
83	IV	All	QA	Audit Reports	10 CFR 830.120, DOE O 5700.6C, QAPD, Crit. 10	1-MAN-013-SIOM, Site Integrated Oversight Manual	N/A	N/A		Process/procedure/scope of this requirement will depend upon the subcontractor audit program
84	IV	All	QA	Management Assessment Reports	10 CFR 830.120, DOE O 5700.6C, QAPD, Crit. 9	1-W37-IA-002, Integrated Planning and Scheduling of Management Assessments	N/A	N/A		Process and procedure for management assessments should be established by the individual subcontractor program
85	V	All	Contracts	Subcontractor's Performance Evaluation	4-16C-COEM-CMG-416, Performance Measurements	FDPM-Section 7.3.3.4	N/A	N/A		Appendix D-2 of the FDPM contains a template
86	V	II, III	DD	Post-Demolition Survey	CERCLA	DPP Sections 3.3.10 and 3.3.13	Approval	Approval	X	
87	V	All	DD	Project Final Closeout Form (FPCO)		FDPM, Appendix F-4	N/A	N/A		Form is in Appendix F of the FDPM
88	V	All	DD	Project Acceptance & Transfer (PA&T)	4-17C-COEM-CMG-417, Construction Closeout	FDPM, Appendix F-3	N/A	N/A		Form contained within Appendix F of the FDPM
89	V	All	DD	Project Beneficial Occupancy Notice (BON) Form	4-17C-COEM-CMG-417, Construction Closeout	FDPM, Appendix F-2	N/A	N/A		Form contained within Appendix F of the FDPM
90	V	All	DD	Decommissioning Final Closeout Report	RFCA	DPP-Section 3.1 and 3.3.11 FDPM-Section 7.3.3.7	N/A	N/A	X	Prepared for all facility disposition activities upon completion of work, incorporates subcontractor Demolition Closeout Report

Phase of Project: I = Scoping; II = Phase I Planning; III = Phase II Planning and Engineering; IV = Execution; and V = Close-out

\*LRA for Industrial Area is State with EPA as SRA and LRA for Buffer Zone is EPA with State as SRA

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Document	Phase	Building Application	Owner Organizations	Deliverable	Driving Document	Implementing Document	DOE Interface	LRA Interface*	Admin. Record	Comments
91	V	All	DD	Partial and Complete Subcontract Close-out Form	FDPM-Section 7.3.3.1	FDPM-Appendix F-1	N/A	N/A		Form is in Appendix F-1 of the FDPM
92	V	All	P&I	Accounting Closeout (ACO)	1-R97-F&A-MCS-001, Management and Control	P&I Standard 001	Information	N/A		P&I completes form with input from D&D project
93	V	All	QA	Lessons Learned Summary Report	10 CFR 830.120; DOE O 5700.6C; QAPD-Crit. 3	1-MAN-017-LLGI-RM, Site Lessons Learned Manual; FDPM-Section 7.3.3.6	N/A	N/A		Only required if incidents occur during project execution

Phase of Project: I = Scoping; II = Phase I Planning; III = Phase II Planning and Engineering; IV = Execution; and V = Close-out

\*LRA for Industrial Area is State with EPA as SRA and LRA for Buffer Zone is EPA with State as SRA

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APPENDIX A-3  
D&D Document Review Matrix

	ALL	SCOPING						Responsible Person	Phone	Fax	Location
	PEP	Reduction of Access Letter	Joint/ Scoping Meeting Minutes	Environmental Checklist	BCP	Performance Measure Completion Report	Establish AR				
DOE Distribution	X	X		X	X	X	X				
LRA Distribution							X				
Administrative Record			X				X				
Project Management Subcontractor (RMRS/SSOC)	p	fr	P	p	p	P	p				
Project Management Kaiser-Hill	Fa	fr	fr	fr	Fa	fr	Fa				
Construction Management Subcontractor (RMRS/SSOC)	lr	lr									
Construction Management Kaiser-Hill	fr	lr									
Health and Safety Subcontractor (RMRS/SSOC)	lr - HASP										
Health and Safety Kaiser-Hill	fr - HASP										
Environmental Compliance Subcontractor (RMRS/SSOC)	lr - WMP		lr	fr			lr				
Environmental Compliance Kaiser-Hill	fr - WMP		lr	Fa			fr				
Project Controls					fr						
Waste Management Subcontractor (RMRS/SSOC)	lr - WMP										
Waste Management Kaiser-Hill	fr - WMP										
D&D Program Management	fr	fr	fr	fr	fr	Fa	fr				
K-H E&I Closure Management	lr	p	Fi								
Environmental Restoration	fr			fr							
General Council Subcontractor (RMRS/SSOC)			lr								
General Council Kaiser-Hill			fr								

	PHASE I PLANNING				PHASE II PLANNING			Responsible Person	Phone	Fax	Location
	RLC Package	RLCR	RCRA CDD	Spill Control Plan	Decision Document	DD Responsiveness Summary	AB				
DOE Distribution		X	X	X			X				
LRA Distribution		X	X	X	X	X					
Administrative Record	X	X	X		X	X					
Project Management Third tier subcontractor				p							
Project Management Subcontractor (RMRS/SSOC)	p	fr	fr	Fa	p	p	P				
Project Management Kaiser-Hill	fr	fr	fr	Fr	Fr		Fi				
Construction Management Subcontractor (RMRS/SSOC)			fr				Fi				
Construction Management Kaiser-Hill			fr				Fi				
Health and Safety Subcontractor (RMRS/SSOC)	ir	Fi	ir		ir		Fi				
Health and Safety Kaiser-Hill		Fi	ir		ir		Fi				
Quality Subcontractor (RMRS/SSOC)	ir	fr	fr		ir		Fi				
Radiological Engineering Subcontractor (RMRS/SSOC)	Fi	ir	P		fr		Fi				
Environmental Compliance Subcontractor (RMRS/SSOC)	Fi	ir	Fa	ir	fr		Fi				
Environmental Compliance Kaiser-Hill	ir	Fi	fr		ir						
Waste Management Subcontractor (RMRS/SSOC)	ir				ir						
Waste Management Kaiser-Hill	ir				ir						
Criticality Engineering							fr				
D&D Program Management	Fa	p	fr	Fr	Fa	Fa	Fi				
K-H E&I Closure Management			Fi		Fi		Fa				
Environmental Restoration			fr	Fi	fr						
Facility Management							Fi				
Fire Engineering							Fi				
General Council Subcontractor (RMRS/SSOC)			fr		fr						
General Council Kaiser-Hill		Fi	fr		fr						

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	EXECUTION								CLOSEOUT		Responsible Person	Phone	Fax	Location
	Demolition Plan and/or Permit	Demolition Closeout Report	Pre-Demolition Survey	State Notification prior to Demolition	Dust Control Plan	Technical Description Sheets	RCRA Closure Certificate	APEN	Post-Demolition Survey	Decommissioning Closeout Report				
DOE Distribution		X	X			X	X		X					
LRA Distribution			X		X				X					
Administrative Record	X		X	X				X	X	X				
Project Management Third tier subcontractor	p	p		p	p	p		p						
Project Management Subcontractor (RMRS/SSOC)	Fa	fr	p	Fa	fr	fr	fr	fr	p	p				
Project Management Kaiser-Hill		fr	fr		fr	fr	fr	lr	fr	fr				
Health and Safety Subcontractor (RMRS/SSOC)		FI				FI	lr			lr				
Health and Safety Kaiser-Hill		FI				FI	lr			lr				
Quality		lr	lr			FI			lr	lr				
Environmental Compliance Subcontractor (RMRS/SSOC)		lr	fr			lr	p	lr	fr	fr				
Environmental Compliance Kaiser-Hill		lr	fr		Fa	lr	Fa	Fa	fr	fr				
Waste Management Subcontractor (RMRS/SSOC)		FI	FI			FI	fr		FI	lr				
Waste Management Kaiser-Hill		FI	FI			FI			FI	fr				
D&D Program Management	FI	Fa	Fa	FI	FI	FI	fr	FI	Fa	Fa				
K-H E&I Closure Management		FI	lr	FI		Fa	FI		lr	FI				
Environmental Restoration							fr							
General Council Subcontractor (RMRS/SSOC)		lr	fr				fr							
General Council Kaiser-Hill		lr	fr				fr							

APPENDIX B-1  
Type 1 Facility Checklist

TYPE 1 FACILITY: \_\_\_\_\_

CURRENT LANDLORD: \_\_\_\_\_ DATE OF COMPLETION: \_\_\_\_\_

ITEM	YES	NO
Does the facility contain radiological postings?		
Does the facility contain chemical postings?		
Are there any installed hazards?		
Do the historical surveys (radiological and chemical) indicate that the facility is clean?		
Are there RCRA units within the facility		
Is there a written history of the building available?		
Is there any equipment/furniture left in the facility?		
Is there a future mission identified for the facility?		
Will the facility be left unsecured after it is vacated?		

If any answer to any of the above questions is "Yes", complete the following questions and complete the "graded" PEP in accordance with Section 2.

*Note: An answer of "Yes" to any question, specifically one dealing with hazards, may indicate the facility is not a Type 1 Facility. Check with the D&D Programs office.*

If the answer to all questions is "No", complete the "graded" PEP in accordance with Section 2.

1. List the Radiological Hazards, location, and quantity:

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2. List the Chemical Hazards, location, and quantity:

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3. List the Physical Hazards:

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APPENDIX B-2  
Listing of Facilities by "Anticipated" Type

Facility Designation	RFETS Facility Number	Square Footage	Anticipated Facility Typing	Miscellaneous Site Information
111 Cluster	111, general staff administration	44,046	1	
	T111A, offices	1,960		
	T115A, offices	6,860		
	T115B, offices	756		
	T115C, offices	3,000		
	116, DOE offices	16,700		
	T117A, offices	15,400		
	T119A, DOE/CDPHE offices	1,755		
	T119B, offices	15,400		
	T121A, offices	1,960		
111B, guard post	N/A			
125/441 Cluster	123, health physics slab	-	2	123 is located over an IHSS
	441, offices	17,790		
	122S, paper shredder/utilities shed	222	1	
	125, standards laboratory	12,900		
	S125, storage shed	N/A		
	126, source storage	450		
	T441A, offices	2,080		
	Tank 79, liquid nitrogen storage	N/A	1	
	Tank 278, compressed air	N/A		
130 Cluster	130, plant engineering offices and warehouse	88,864	1	
	C130, storage yard container	378		
	T130A, offices	15,400		
	T130B, offices	15,400		
	T130C, offices	15,400		
	T130D, offices	15,400		
	T130E, offices	15,400		
	T130F, offices	15,400		
	T130G, offices	15,400		
	T130H, offices	15,400		
	T130I, offices	15,400		
	T130J, offices	15,400		
	131, offices	22,000		
	T131A, offices	1,960		
	132, electrical substation #9	1,180		
	130SY, maintenance storage yard	N/A		
223 Cluster	223, nitrogen supply facility	3,500	1	Cluster is located over an IHSS
	223A, ERM storage facility	198		
	552, bottled gas storage building	4,170		
	Tanks 17 and 22, molecular sieve absorber	N/A	1	

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Facility Designation	RFETS Facility Number	Square Footage	Anticipated Facility Typing	Miscellaneous Site Information
300/500 Cluster	S551, materials shelter	N/A	2	Portions of cluster are located over an IHSS
	334, general shop	42,950	1	
	549, RCT shop and offices	1,920		
	553, welding shop	1,280		
	554, storage and shipping dock building	1,190		
	556, metal cutting building	640		
	333, paint shop and sand blast	3,060		
	T334B, offices	1,960		
	T334C, offices	1,440		
	T334D, offices	600		
	T551A, offices	3,360		
	Tank 106, drix argon storage	N/A	1	
	Tank 108, air compressor	N/A		
	Tank 109, liquid nitrogen storage	N/A		
	Tank 161, Freon 12 accumulator	N/A		
331 Cluster	331, garage and fire station	23,540	1	Portions of cluster are located over an IHSS
	331A, storage	116		
	331S, storage shed	563		
	C331, storage	190		
	T331A, trailer (barracks)	560		
	335, fire training building	2,160		
	S372, bus stop/car pool shelter	N/A		
	Tank 100, propane storage	N/A	1	
	Tank 101-102, diesel blend storage	N/A		
	Tank 103-104, gasoline storage	N/A		
	Tank 115, propane storage	N/A		
	TK-5A, TK-5B, and TK-6A UST diesel blend storage	N/A		
	TK-7A and TK-8A, UST gasoline	N/A		
371/374 Cluster	371, plutonium recovery building	315,022	3	110 gloveboxes in 371
	374, process waste treatment facility	43,636	2	
	378, waste collection pump house	130		
	262, diesel tank	2,129	1	
	373, cooling towers and pump house	3,198		
	377, air compressor building	120		
	381, fluorine storage building	1,320		
	374A, 371-374 carpenter shop	800		
	Tanks 163-164, product water tank	N/A	1	
	Tank 165, cement silo	N/A		
	Tank 167, nitric acid storage	N/A		
	Tanks 168-169, KOH storage	N/A		
	Tank 170, liquid nitrogen storage	N/A		
371A Cluster	Tanks 224-227, water and NaOH storage	N/A		
	Tank 228, spray dryer tank	N/A		
	TK-4A, aboveground diesel storage	N/A		
	376, offices	3,000	1	
	T371H, offices	720		
	T371I, offices	1,440		
	T371J, offices	1,440		
	T371K, offices	1,440		
	T376A, offices	1,960		

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Facility Designation	RFETS Facility Number	Square Footage	Anticipated Facility Typing	Miscellaneous Site Information	
371T Cluster	367, storage shed and road maintenance	3,000	1		
	T371A, offices	2,080			
	T371C, offices	11,400			
	T371D, offices	1,960			
	T371E, restrooms	240			
	T371F, offices	1,960			
440 Cluster	440, waste storage and repackaging	34,320	2	Portions of cluster are located over an IHSS	
	439, mod center machine shop	5,140	1		
	T439A, offices	600			
	T439D, offices	1,440			
442/452 Cluster	T428B, tool shed	360	13	Portions of cluster are located over an IHSS	
	442, HEPA filter test laboratory and warehouse	16,740			
	T442A, offices	520			
	452, offices	6,000			
	T452A, offices	1,440			
	T452B, offices	1,440			
	T452C, offices	1,440			
	T452D, offices	1,440			
	T452E, restrooms	80			
	T452F, offices	1,440			
	T452G, respirator fit facility	1,440			
	S444, bus stop and car pool shelter	N/A			
	S452, storage	N/A			
444 Cluster	444, manufacturing building	161,980	2	Portions of cluster are located over an IHSS	
	447, manufacturing building	23,100			
	448, U material storage	3,614			
	450, filter plenum building	198			
	451, filter plenum building	2,760			
	455, filter plenum building	1,800			
	427, emergency generator building	312	1		
	445, carbon storage	3,273			
	449, oil and paint storage	240			
	453, oil storage	384			
	454, cooling tower	375			
	457, cooling tower	225			
	427A, fuel storage tank	198			
	449A, RMRS maintenance annex	N/A			
	449C, maintenance carpenter shop	N/A			
	S449, maintenance storage	N/A			
	Tank 64, propane storage	N/A	1		
	Tanks 66-67, liquid nitrogen storage	N/A			
	Tank 69, liquid argon storage	N/A			
	Tank 70, liquid nitrogen storage	N/A			
460 Cluster	460, offices (former non-nuc. mfg building)	212,980	1		
	T124A, DOE offices	15,400			
	S460, bus shelter	72			
	462, cooling tower	589	1		
	Tanks 57 and 59, liquid nitrogen storage	N/A	1		
	Tank 58, DRIOX argon storage	N/A			
	Tank 289, UST diesel	N/A			
	Tanks 356-366, chemical waste storage	N/A			



Facility Designation	RFETS Facility Number	Square Footage	Anticipated Facility Typing	Miscellaneous Site Information
551 Cluster	551, general warehouse and contractor shop	44,140	2	Cluster is located over an IHSS
559 Cluster	559, plutonium analytical laboratory	30,600	3	Portions of cluster are located over an IHSS
	561, filter plenum building	5,479	2	
	528, process waste pit	630		
	562, emergency generator building	384	1	
	564, offices	3,000		
	560, cooling tower	400		
	563, cooling tower	250		
	559A, 559 accountability board shelter	N/A	1	
	559-TUN, 559-561 tunnel	N/A		
566 Cluster	Tank 128, liquid nitrogen storage	N/A	1	
	Tank 129, liquid argon storage	N/A		
	Tank 130-131, UST diesel storage	N/A		
	TK-14 and TK-15, AST diesel storage	N/A		
569 Cluster	566, protective clothing decon facility	13,700	2	Cluster is located over an IHSS
	566A, protective clothing plenum	4,000		
	566B, carpenter shop/storage shed	480	1	
	Tank 132, diesel tank	N/A		
569 Cluster	569, crate counter and waste storage facility	7,620	2	
	570, filter plenum	683		
664 Cluster	664, waste storage and shipping facility	13,730	2	Portions are over an IHSS
	666, TSCA storage building	1,584		
	668, drum storage and certification	1,540		
	T664A, offices	4,392	1	
690T Cluster	C664, waste storage yard	N/A		
	663, storage and shipping building	4,446	2	
	662, plant power warehouse and offices	2,600	1	
	T690N, offices	2,940		
	Tank 36, diesel storage	N/A	1	
707 Cluster	Tank 37, propane storage	N/A		Cluster is located over an IHSS  172 gloveboxes in 707
	707, PU manufacturing building	196,930	3	
	731, process waste pit (707)	506	2	
	708, compressor building	7,460	1	
	711, cooling tower	1,900		
	711A, cooling tower emergency diesel pump	2,040		
	718, service building	294		
	707T, tomographic gamma scanner system trailer	N/A		
	708S, skid-mounted breathing air compressor	N/A		
	Tank 206, carbon tetrachloride storage	N/A	1	
	Tank 208, liquid argon storage	N/A		
	Tanks 209-221, helium storage	N/A		
	Tank 223, liquid nitrogen storage	N/A		
	Tank 284, helium storage	N/A		
	Tank 290, UST diesel blend	N/A		
	Tanks 324-325, diesel storage	N/A		
	Tank TK-16, AST diesel storage	N/A		

Facility Designation	RFETS Facility Number	Square Footage	Anticipated Facility Typing	Miscellaneous Site Information
750 Cluster	705, coating laboratory	3,700	2	Portions of cluster are over an IHSS
	S750, custodial storage closet east end of T750B	N/A		
	706, library and office	4,000	1	
	T706A, offices	1,440		
	T707B, offices	520		
	T707S, flammable liquids storage	N/A		
	709, cooling tower	1,900		
	709A, emergency generator/pump	300		
	750, offices and cafeteria	57,170		
	T750A, offices	1,440		
	T750B, office and computer based training	720		
	T750C, offices	720		
	T750D, offices	1,960		
	K750, kiosk	160		
	763, PA breezeway	3,160		
	T764A, offices	1,960		
	T764B, offices	1,960		
	T779A, offices	1,440		
	Tank 205, liquid nitrogen storage	N/A	1	
750HAZ Cluster	S51PAD, waste storage pad	N/A	1	Portions of cluster are over an IHSS
	750HAZ, main hazardous waste storage facility	N/A		
	S374, building 374 storage	N/A		
750PAD Cluster	Tent 2, mixed waste storage	9,000	2	Tent 5 contains a permacon facilities for repackaging LLW containers
	Tent 3, mixed waste storage	10,500		
	Tent 4, mixed waste storage	10,800		
	Tent 5, mixed waste storage	10,800		
	Tent 6, mixed waste storage	21,600		
	Tent 12, pondcrete storage	16,198		
	750-DP, 750 Pad Decon Pad	N/A	1	
	750P, propane tank farm	N/A		
	T750F, locker trailer	980		
	T750G, break trailer	980		
	Tank 117, storage	N/A		

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Facility Designation	RFETS Facility Number	Square Footage	Anticipated Facility Typing	Miscellaneous Site Information
771/774 Cluster	771, plutonium recovery facility	151,430	3	207 gloveboxes in 707  Portions of cluster are over an IHSS
	771C, nuclear waste packaging/drum counting	4,648	2	
	774, liquid waste treatment plant	25,060		
	207, building 774 untreated waste storage tank	7,303		
	728, process waste pit (771)	101		
	714, HF acid storage	182	1	
	714A, HF gas storage	192		
	714B, emergency breathing air	192		
	715, emergency generator #1	824		
	715A, emergency generator	N/A		
	716, emergency generator #2	286		
	717, magnehelic gauge	48		
	K771, kiosk east of T771B	160		
	772, fluorine storage	1,129		
	772A, acid storage	400		
	774A, steam condensate holding tank	363		
	774B, steam condensate holding tank	363		
	775, sewage lift station	152		
	S770, storage building	N/A		
	771S, 771 stack	N/A	1	
	Tanks 173 and 179, propane storage	N/A	1	
	Tank 174, liquid argon storage	N/A		
	Tank 175, liquid nitrogen	N/A		
	Tank 176, NaOH storage	N/A		
	Tank 180, cooling water storage	N/A		
	Tanks 182-184, underground, out of service	N/A		
	Tank 185, KOH storage	N/A		
	Tanks 192-193, underground diesel storage	N/A		
	Tanks 194-195, hydrofluoric storage	N/A		
	Tanks 292-293, underground firewater collection	N/A		
	TK-21, aboveground diesel storage	N/A		
771A Cluster	771-DT, decon. trailer	N/A	2	Portions of cluster are over an IHSS
	770, maintenance action center/storage	2,860	1	
	770B, carpenter shop	564		
	T771A, offices	1,620		
	T771B, offices	1,440		
	T771C, offices	520		
	T771D, offices	520		
	T771E, offices	1,440		
	T771F, offices	1,960		
	T771G, offices	1,198		
	T771H, offices	1,440		
	T771J, offices	1,960		
	T771K, offices	1,960		
	T771L, restrooms	320		
	Tank 197, propane storage	100		

Facility Designation	RFETS Facility Number	Square Footage	Anticipated Facility Typing	Miscellaneous Site Information
776/777 Cluster	776, MFG building	156,198	3	64 gloveboxes in 776
	777, assembly building	74,820		
	730, process waste pit (776)	900	2	297 gloveboxes in 777
	701, waste management R&D	5,177	1	
	702, pumphouse	980		
	703, pumphouse	1,140		
	712, cooling tower	2,900		
	712A, natural gas building	100		
	713, cooling tower	2,900		
	713A, valve pit	100		
	776A, air compressor	N/A		
	781, are compressor building	270		
	771-TUN, 771-776 tunnel	N/A		
	Tank 199, liquid nitrogen storage	N/A	1	
	Tank 198, liquid argon storage	N/A		
	Tank 202, diesel storage	N/A		
	Tank 198, breathing air tank	N/A		
	Tank 203, water/coolant storage	N/A		
	Tank 207, liquid argon storage	N/A		
	Tank 244, underground storage	N/A		
	Tank 245, underground diesel	N/A		
	TK-23, aboveground diesel	N/A		
778 Cluster	778, service building, lockers and maintenance shop	31,198	2	Cluster is located over an IHSS
	732, laundry waste pit (778)	76		
790 Cluster	790, radiation calibration laboratory	6,768	1	
800A Cluster	884, waste storage	3,220	2	Portions of cluster are over an IHSS
	830, storage/isolated power supply	384	1	
	885, maintenance/paint and oil storage	960		
	890, pump house	1,361		
	T881A, offices	980		
	T881B, offices	720		
	T883A, offices	1,960		
	T883B, offices	1,960		
	T883C, office	1,960		
	T883D, restrooms	198		
	882 Slab, concrete slab	N/A		
	889 Slab, concrete slab	N/A		
850	850, Offices	39,894	1	

Facility Designation	RFETS Facility Number	Square Footage	Anticipated Facility Typing	Miscellaneous Site Information
881 Cluster	881, manufacturing and general support	245,160	2	Portions of cluster are over an IHSS
	881F, filter plenum building	8,467		
	887, sewage and process waste pumping	1,555		
	881C, cooling tower	452	1	
	881G, emergency generator building	1,075		
	881H, electrical equipment	1,960		
	881-S1, 881-883 stack	N/A		
	881-S2, 881-883 stack	N/A		
	881-S3, 881-883 stack	N/A		
	881-TUN, 881-883 tunnel	N/A		
	Tank 13, underground concrete foundation drain tank	N/A	2	
	Tank 16, underground foundation sump tank	N/A		
865 Cluster	Tank 2, UST diesel storage	N/A	1	Portions of cluster are located over an IHSS
	Tank 14, liquid nitrogen storage	N/A		
	Tank 15, diox argon storage	N/A		
	Tank 29, helium storage tank	N/A		
	TK-66, AST diesel storage	N/A		
	865, material and process development lab	38,250	2	
	866, process waste transfer building	418		
	867, filter plenum building	2,809		
883 Cluster	868, filter plenum building	2,133		Portions of cluster are located over an IHSS
	827, emergency generator building	384	1	
	865A, cooling tower	300		
	863, electrical transformer building	400		
	C865, carpenter shop	N/A		
	879, filter plenum building	3,640	2	
	883, rolling and forming facility	60,500		
	883C, cooling tower	452	1	
886 Cluster	S865, carpenter shop	N/A		Portions of cluster are located over an IHSS  3 gloveboxes in 886
	Tanks 10-11, UST diesel	N/A	1	
	Tank 12, liquid argon storage	N/A		
	Tank 24, propane storage	N/A		
	Tank 26, carbon dioxide storage	N/A		
	Tank 252, liquid argon storage	N/A		
	Tank 323, carbon dioxide storage	N/A		
	TK-25, AST diesel storage	N/A		
	828, process waste pit (886)	283	2	
	875, filter plenum building	3,297		
	886, nuclear safety/criticality facility	10,785		
	880, storage building	800	1	
	T886A, office	1,960		
	888A, electrical substation	384		
	Tank 39, underground U contaminated wastewater	N/A	2	
	Tank 40, storage	N/A	1	
	Tank 294, storage	N/A		

Facility Designation	RFETS Facility Number	Square Footage	Anticipated Facility Typing	Miscellaneous Site Information
891T Cluster	T886B, offices	6,000	1	Portions of cluster are over an IHSS
	T886C, offices	2,000		
	T891B, offices	980		
	T891C, offices	3,920		
	T891D, offices	720		
	T891E, offices	1,440		
	T891F, offices	720		
	T891G, offices	720		
	T891O, offices	2,800		
	T891P, offices	720		
	T891Q, restrooms	768		
	T891R, offices	2,880		
	T891V, offices	720		
	T893A, offices	15,400		
T893B, offices	15,400			
910 Cluster	215D, evaporation distillate storage tank	6,813	1	
	226, NaCl brine storage tank	473		
	227, nitric acid storage tank	326		
	228A, drying bed	1,105		
	228B, drying bed	1,105		
	910, reverse osmosis - evaporator	9,563	1	
	Tank 143, storage 450-05A	N/A		
	Tank 144, underground storage D-15	N/A		
903/905 Cluster	Tank 336, EDTA storage	N/A	2	Portions of cluster are over an IHSS
	Storage yard in PA	N/A		
	903A, ER decontamination pad	1,000	1	
	966, PA decon. pad	4,000		
	905, field operations yard	N/A		
	903A2, ER decontamination pad storage	N/A		
	903B, decon pad sedimentation tanks	N/A		
	903PAD, contamination barrier/pad	N/A		
	952, isolated toxic gas storage building	N/A		
	903A1, support building adjacent to ER decon. Pad	N/A	2	
	Tanks 262-266, decontamination water storage	N/A		
	Tank 268, decontamination sediment/water storage	N/A		
	Tank 346, decontamination sediment/water storage	N/A		
	Tank 347, decontamination water storage	N/A		
	Tank 348, decontamination sediment/water	N/A		
	Tank 349, diesel storage	N/A		
904/906 Cluster	906, central waste storage facility	25,000	2	Tents 10 and 11 contain permacon facilities for repackaging LLW containers
	Tents 7, 8, 9, 10, and 11, pondcrete storage	81,000		
	T760A, shower trailer	160		
	902PAD, sludge storage pad	N/A		
	904PAD, sludge storage pad	N/A		
	904P, propane tank farm	N/A	1	Portions of cluster are located over an IHSS
	S760B, bus stop/carpool shelter	400		
	T904A, break trailer	400		
	Tank 237, propane storage	N/A	2	
	Tanks 269, 271-273, decontamination water storage	N/A		
	Tanks 274-275, decontamination sediment water	N/A		
	Tanks 359-360, wastewater storage	N/A		
	Tank 364, decontamination water storage	N/A		

Facility Designation	RFETS Facility Number	Square Footage	Anticipated Facility Typing	Miscellaneous Site Information
964 Cluster	964, waste storage building	5,000	2	Cluster is located over an IHSS
991 Cluster	991, product warehouse	37,880	2	Portions of cluster are located over an IHSS
	996, storage vault	7,198		
	997, storage vault	6,780		
	998, storage vault	2,640		
	999, storage vault	4,420		
	991TUN, tunnels between 991 cluster buildings	N/A		
	984, shipping container storage facility	3,198	1	
	985, filter plenum building	2,400		
	989, emergency generator building	384		
	Tank 334, met lab tank water storage	N/A	2	
Tank 149, liquid waste chromium storage	N/A	1		
Tank 150, glycol storage	N/A			
Tank 151, diesel storage	N/A			
TK-33, diesel storage	N/A			
AIRMON Cluster	19 on-site monitoring stations	N/A	1	
H2OSIZ Cluster	930, effluent monitor station	57	1	Portions of cluster are over an IHSS
	931, effluent monitor station	57		
H20GIZ Cluster	891, groundwater treatment facility	3,000	1	
	T900A, groundwater treatment trailer	384		
	T900B, groundwater treatment trailer	384		
	T900E, groundwater treatment trailer	384		
	Tank 891-T-198, untreated water storage	N/A	1	
	Tanks 891-T-198-202, influent equalization	N/A		
	Tank 891-T-203, ion exchange	N/A		
	Tank 891-T-204, clean water tank	N/A		
Tanks 891-T-205-207, treated groundwater	N/A			
H20SBZ Cluster	Tent 14, A-4 pond storage tank	9,000	1	Walnut Creek station is located over/in an IHSS
	306, Walnut Creek water sampling station	100		
	932, Pond A-1 effluent monitoring station	57		
	933, Indiana/Walnut Creek effluent monitoring station	79		
	934, Woman Creek effluent monitoring station	57		
	994, Pond B-4 effluent monitoring station	70		
	Tank 331, diesel blend storage	N/A	1	
	Tanks 332-333, propane storage	N/A		
	Tanks 362-363, cycled water storage	N/A		
HSOGBZ Cluster	308B, interceptor trench pump house	64	2	Pipelines are located over/in an IHSS
	308B-A, ITS waste storage tank-341	10,297		
	308B-B, ITS waste storage tank-343	10,297		
	308B-C, ITS waste storage tank-344	10,297		
	T900C, groundwater treatment trailer	384	1	
	T900D, offices	600		
	900ATM, CFFCU automated teller machine	N/A		
	ITSP, interceptor trench system pipelines	N/A		
Tank 330, diesel blend storage tank	N/A	1		

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Facility Designation	RFETS Facility Number	Square Footage	Anticipated Facility Typing	Miscellaneous Site Information
INFELI Cluster	212, electrical distribution system	N/A	1	
	214, fence and street lighting	N/A		
	661, electrical substation	1,160		
	675, electrical substation	1,150		
	679, electrical substation	500		
	680, electrical substation	500		
	681, electrical substation building	2,302		
INFELN Cluster	515, electrical substation #5	410	1	Portions of cluster are located over an IHSS
	516, electrical substation #6	660		
	517, electrical substation #7	80		
	518, electrical substation #8	410		
	520, substations 517-518 switchgear building	1,020		
	575, electrical power station	960		
INFFCM Cluster	T122A, mobile decontamination system trailer	320	2	
	112, telecom center and offices	9,280	1	
	115, offices and EOC	16,964		
	122, medical/occupational health	8,600		
	220, telephone and communication system	N/A		
	222, data line system	N/A		
	Tank 280, liquid nitrogen storage	N/A	1	
INFGAS Cluster	869, natural gas meter house	420	1	
	210, natural gas distribution system	N/A	1	
	Tank 30, underground pressure tank	N/A		
INFLFC Cluster	219, new sanitary landfill	N/A	1	
	280, sanitary landfill support facility	8,134		
	281, sanitary landfill leachate valve building	80		
	282, landfill FP building and 120,00 gallon water tank	1,284		
	283, sanitary landfill evaporation pond	N/A		
	284, landfill leachate collection and storage	450		
	S281, sanitary landfill bale storage	N/A		
	OLF, closed landfill			
INFMT Cluster	180, meteorological data collection tower	100	1	
	181, meteorological data collection tower	100		



Facility Designation	RFETS Facility Number	Square Footage	Anticipated Facility Typing	Miscellaneous Site Information
INFSEW Cluster	208, sanitary sewer system	N/A	1	Portions of cluster are over an IHSS
	209, storm drainage system	N/A		
	971, sludge drying bed	1,460		
	972, sludge drying bed	1,460		
	973, sludge drying bed	1,460		
	974, sludge drying bed	1,460		
	975, sludge drying bed	2,000		
	976, sludge drying bed	1,460		
	977, sludge drying bed	1,064		
	T974A, treatment trailer	110		
	988, tertiary treatment pump house	218		
	990, pre-aeration building	222		
	990A, wastewater treatment	198		
	995, sewage treatment facility	6,000		
	995-C-1 through 5, sewage treatment clarifiers	N/A	2	
	995-CCC-1 and 2, sewage treatment chlorine contact chambers	N/A		
	995-ECI 1, 2, 3, sewage treatment effluent tank	N/A		
	995-IC 1, 2, 3, sewage treatment influent tanks	N/A		
	995-AB-1 and 2, sewage treatment aeration basins	N/A		
988A, ultraviolet disinfection	N/A			
Tanks 238-240, STP effluent sand filter	N/A	1		
INFSTM Cluster	211, steam distribution	N/A	1	
	240, steam condensate storage tank-073	7,030		
	443, heating plant	18,606		
	710, steam valve house	540		
	S443, 443 storage shed	N/A		
	Tanks 25 and 27, fuel oil storage	N/A	1	
	Tanks 28 and 31, diesel storage	N/A		
	Tanks 90 and 91, UST diesel storage	N/A		
	Tanks 92-95, UST No. 6 fuel oil	N/A		
	Tank 96, sulfuric acid storage	N/A		
	Tank 97, NaOH storage	N/A		
	Tank 98, boiler blowdown tank	N/A		
	TK-9A and TK-13A, diesel storage	N/A		
	INFWTI Cluster	124, water treatment plant	8,308	
129, water treatment, raw water strainer		228		
215A, domestic water storage		2,000		
215B, domestic water storage		2,000		
206, domestic water		N/A		
216, raw water supply and pump house		N/A		
fire hydrants		N/A		
Tanks 87-88, underground concrete settling beds		N/A	1	
Tanks 279 and 281, under concrete sump tanks		N/A		
TK-2A, aboveground diesel		N/A		
INFWTN Cluster	215C, domestic water storage	2,000	1	
	928, fire water pump house	1,255		
	Tank 140, #2 fuel oil	N/A	1	
PU&D Cluster	T303C, offices	198	1	
	NSY, North Storage Yards	N/A		
	PU&D, PU&D Yard	N/A		

Facility Designation	RFETS Facility Number	Square Footage	Anticipated Facility Typing	Miscellaneous Site Information
PWTS Cluster	231, process waste holding tank	265	2	Portions of cluster are over an IHSS
	231A, process waste holding tank	6,225		
	231B, process waste holding tank	15,159		
	428, waste collection tank and pump house	265		
	429, underground process waste pit	105		
	OPWLT, old process waste lines and tanks	N/A		
	Tank 2, underground process waste vault	441		
	VV011-VV020, process waste valve vaults	N/A	2	
Tank 76, process waste tank	N/A	2		
PWTSN Cluster	VV001-VV010, process waste valve vaults	N/A	2	Cluster is over an IHSS
	Tanks 18-19, UST process waste tank	N/A	1	
	Tanks 304-306, UST process waste storage	N/A		
	Tanks 312-313, UST process waste sump	N/A		
SECBZI Cluster	T303D, offices (shooting range)	1960	1	
	T303E, offices (shooting range)	212		
	303, live fire range	N/A		
SECBZO Cluster	120, guard post	560	1	
	920, guard post	560		
	S120, bus stop/carpool	N/A		
	Tanks 43 and 247, septic tank	N/A	1	
	Tanks 243 and 287, abandoned storage tank	N/A		
	Tanks 318-319, diesel blend storage	N/A		
SECIZ Cluster	TK-1A and TK-32A, aboveground diesel tanks	N/A	1	Portions of cluster are over an IHSS
	119, security repair and fitness	11,198		
	121, security command center	6,530		
	127, emergency generator building	504		
	128, vehicle shelter, plant protection	2,448		
	864, guard post	1,160		
	987, storage vault, plant protection	182		
	993, security storage	1,198		
Tanks 288 and TK-3A, diesel blend	N/A	1		

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Facility Designation	RFETS Facility Number	Square Footage	Anticipated Facility Typing	Miscellaneous Site Information
SECNPZ Cluster	213, protection alarm and communication system	N/A	1	Portions of cluster are located over an IHSS
	260, perimeter security zone	48,000		
	372, guard post, portal 2	520		
	372A, personnel access control (PACS-2)	1,800		
	375, guard tower T-4	334		
	519, alarm systems storage	1,020		
	550, guard tower	338		
	557, guard post	310		
	705T, temporary guard post	N/A		
	706T, temporary guard post	N/A		
	761, guard tower	338		
	762, guard tower	368		
	762A, personnel access control (PACS-1)	2,351		
	764, PIDAS data collection building	1,763		
	765, secondary alarm center	960		
	765A, radio tower	1,000		
	773, Guard Post	190		
	773S, skid mounted guard post	N/A		
	792, guard post, portal 3	288		
	792A, personnel access control (PACS-3)	1,800		
	888, guard post	624		
	901, guard tower	338		
	992, guard post	370		
	Tanks 152, 154 and 162 propane storage	N/A	1	
	Tanks 153, 155, and 235 diesel storage	N/A		
	Tank 230, glycol storage	N/A		

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**APPENDIX C-1**  
**Project Execution Plan (PEP) Template**

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Kaiser-Hill

ROCKY FLATS [Project Title] PROJECT

Draft B

**PROJECT EXECUTION PLAN**

Prepared by: [Project Manager's Name]

Date: [ ]

*Note: Items italicized & highlighted within this Template represent information or instructions to be addressed or included within that section of the document.*

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## APPENDICES

- Appendix A - Project Work Breakdown Structure (WBS) Dictionary
- Appendix B - Project Schedules
- Appendix C - Project Cost Estimate (BEST)
- Appendix D - Project Baseline Summaries (PBSs)
- Appendix E - Project Health and Safety Plan (HASP)
- Appendix F - Project Waste Management Plan (WMP)
- Appendix G - Project Applicable and Relevant or Appropriate Requirements (ARARs) Listing
- Appendix H - Project XXX Quality Assurance Project Plan (if required)

## NOTES:

1. This template is for the project to use as an aid to create an effective Project Execution Plan (PEP). The project should apply common sense and a graded approach and include only what is necessary for the primary users of the plan, e.g., the project team and the project customer, at a minimum.
2. The primary purpose of the PEP is to provide guidance to the project team on HOW to work together to achieve project results that satisfy the customer.
3. Unless there is a reason to do otherwise, The project should keep the Level 1 Section headings. This enables easy access for people who are familiar with other RFETS Project Execution Plans. If an entire section does not apply to your project, just list the heading and put 'N/A' below the heading.
4. Keep the PEP as short as possible. In no instance **Should** it (exclusive of appendices or attachments) exceed 50 pages. Shorter is better. Extensive tables or detailed information **Should** be placed in appendices.
5. Limit the approvals. In general, only the K-H and subcontractor project managers **Should** approve the plan.
6. Information in *italics* (except the TOC) illustrates the type of information to include in the section. Replace this with information appropriate for your project.

## PROJECT IDENTIFICATION

The [Project Title, e.g. cluster, building, or component closure] Project provides [define area or item to be decommissioned, or other activity]. It includes [list facilities or areas]. This project has been included in the Performance Measurement Baseline (PMB), which governs the interface of multiple projects and programs, as part of the [Program Title] and is part of the overall Rocky Flats Closure Project (RFCP). This PEP extends the planning and organization from the Site to the project level, and defines the details that roll up to the Site systems.

*Section 1 should provide the basic information to allow a reader to get an understanding of the project: the areas included, the problems/levels of contamination expected, the justification and the cost.. Appropriate figures and pictures **SHALL** be included to clearly identify and describe the physical layout and problem areas to be addressed by the project scope.*

### 1.1 PURPOSE

The purpose of the [Project Title] project is decontaminate, decommission, and demolish buildings xyz and xxz, etc.

*The purpose is a summary statement from the organization or sponsor outlining why the project is taking place. A purpose statement will typically include the phrases: to supplement; to overcome, to replace, or to change. - a single sentence or short paragraph stating why this project team exists.*

### 1.2 BUILDING DESCRIPTION/HISTORY

The xyz building was used for the production of nuclear weapons components for thirty-seven years. The building has experienced several events, which left a number of areas contaminated with ....

*Building description/history - include information describing the building or cluster, and the history of activities, which impact its decommissioning. Provide information necessary to understand impact to other programs/projects, technical risks that **may** continue based on building descriptions and building history. It **Should** include a short summary of events or supporting projects within the building or cluster (e.g. building deactivation, if not included in the PEP scope) that have lead to this project; including the previous project completion dates, deliverables, and funding. When necessary for clarity, this section **may** include general information on interfaces with other projects that affect decision on scope, schedule, budget, methods of performance, or any other project parameter. It **Should not** include information on activities or programs or the Site in general unless necessary to understand a unique aspect of the project.*

### 1.3 PROJECT JUSTIFICATION

*Summarize the need for the project including major drivers, compliance agreements and schedules, projected cost savings, and relationship and supporting role to the RFETS Closure Plan. Emphasize why the project needs to be done **now** (or per the project schedule, if the project is to be planned now and executed in the future), and not delayed – schedule constraints, reduction of landlord costs, resource limitations, etc.*

### 1.4 PROJECT FUNDING

*The purpose of this section is to provide an indication of overall project magnitude, and how it fits into the overall Site WBS and funding structure. It should identify all necessary project funds (including fund source and type, if necessary) and reference numbers (PBS, WAD, WBS, and primary charge numbers). Include prior year project funding as appropriate for reference purposes. Outline the source and restrictions on the funds proposed for*

funding the project. Include appropriate, brief table giving budget/funding information and linking back to Site-level documents, including the document and the date of the data. The information, and table, if appropriate, may be extracted intact from the WAD(s), PBD(s), or other document(s). An example giving the level of detail is given below:

**Example [Project title] Funding Levels**

WBS	Direct Activities	FYXX-FY98 Funded	FY99 (BEST)*	FY00 (BEST)	FY01+ (BEST)	Total
WAD XX	XXXX Cluster Project					
1.1.XX.YY.01	XXXX Landlord					
1.1.XX.YY.02	XXXX Hazards Reduct.					
1.1.XX.YY.04	XXXX Decommission.					
1.1.XX.ZZ.01	ZZZZ Characterization					
1.1.XX.ZZ.03	YYYY Waste Mgmt.					
WAD YY						
Etc.						
Total Funding						

\* Indicate data source

## PROJECT SCOPE

Describe the organization of the Project Scope section, and highlight any particularly unusual project or document features (e.g. deactivation covered elsewhere, scoping-level document, does not include building demolition, includes remediation of under-building contamination, etc.).

### 2.1 SCOPE

Provide a detailed summary (i.e. 2-5 pages) defining major elements of the project, with sufficient detail to bound project parameters and accurately reflect the project Design Criteria. This section, following the "description of the problem" provided in Section 1.1 and 1.2, describes how the project team has translated this into the project work scope and the general organization of work. It should provide sufficient detail on the scope of the project elements that the reader can understand the work, but refer the reader to the WBS Dictionary (Appendix A) for additional detail. The section should be organized around the WBS, if possible, both at Level 5 of the Site WBS (e.g. hazards reduction, deactivation, and decommissioning), and at lower levels (e.g. types of work in a building). The scope should identify objectives in specific areas of the project, but leave definition of WBS element endpoints to the WBS Dictionary. The WBS Dictionary also needs to include or reference appropriate completion criteria. This may include acceptance and closeout criteria necessary to clearly define milestone completion and formal completion of an activity, building cleanup criteria, characterization completion criteria, etc.

The elements of scope for the life-cycle of the building or area to be decommissioned must be included in this section, including remaining deactivation, hazards reduction, decommissioning, and environmental restoration (that will be done on an building area-specific basis; e.g. Building 707 would not discuss the 700-area cap). Elements that are not yet defined should be included in summary form with the best information available and indication of at what point in the project better definition will become available. E.g. "The scope of remediation of UBCs will be defined after sampling which will occur after removal of gloveboxes and Zone I ventilation from the building." All scope elements identified in the Facility Disposition Program Manual (FDPM) Should be evaluated for inclusion.

### 2.2 BOUNDARIES

Briefly define the physical boundaries of the project, including the buildings/areas, depth of decommissioning activities (e.g. slab, footings, etc.), utilities disconnects, etc. This section also may discuss other limitations on the project or interfaces with other projects if particularly important, such as sharing of resources, work for other,



etc. This should **not** include normal interfaces with support organizations such as Waste Management, Engineering, etc.

### **2.3 PROJECT DOCUMENTS**

This section identifies the project-specific documents or deliverables as elements of scope that must be produced by the project in the planning and execution phases; it identifies all of the major project-specific documents that the project team must understand. This includes RFCA decision and characterization documents, RCRA closure plans, PEP appendices (Waste Management Plan, HASP, etc.), acquisition strategy, configuration management plan, quality assurance plan, IWCPs, engineering packages, subcontractor RFPs/SOWs, and any other document which represents a significant project deliverable. It is intended to define significant elements of project scope, and **Should not** repeat FDPM, Appendix A, Project Strategies, Plans, and Deliverables Matrix. The major documents in this section **Should** be identified as milestones on the project schedule. The section **may** cover interfaces with specific project and Site-level documents but is **not** intended to provide a detailed description of functions and requirements flow-down; it **Should not** include generic site-wide policies or procedures. The section **may** include a document hierarchy diagram if necessary to show document organization within the project.

## **TECHNICAL APPROACH**

This section discusses the organization of the remainder of the section, and identifies any highlights.

### **3.1 TECHNICAL STRATEGY**

This section describes particular technical approaches and methodologies which guide the overall project (e.g. remove gloveboxes and Zone 1 systems first, remove MAA security requirements) and how these impact the prioritization and organization of project work. It should describe the criteria used to establish WBS work elements or SETs, and the approach for their prioritization/sequencing. It discusses technical approaches and methods used to resolve specific problems (e.g. glovebox size reduction, demolition of massive concrete walls, etc.).

Elements addressed should be phrased as answers to implicit questions (e.g. "How will personal property/equipment be dispositioned?") but should **not** be in a question-and-answer format. The intent is not to have correspondence with the WBS, but to address potential problem areas and demonstrate that the project recognizes the problem, and have identified or are working on the solution. If a solution is not yet identified, then a trade-off study or other specific process to achieve resolution should be identified. If applicable, include discussion of the potential use of new technologies. Note: Alternatives and recommendations approaches are provided in the Decision Document.

The technical approaches for the life-cycle of the building or area to be decommissioned must be included in this section, including remaining deactivation, hazards reduction, decommissioning, and environmental restoration, even if out-year actions are indicated as to be determined.

### **3.2 PROJECT CLOSURE**

Identify the general approach that the team **Should** follow to close out the project (reference FDPM, Chapter 7). Project closure ensures that the project team correctly disposes all aspects of the project at closure. Similar to the readiness process, project closure addresses final disposition of facility and equipment, project records, and project personnel, and the connections between all three entities. Closure activities **Should** be ongoing activities throughout the life of the project, as much of the data necessary for project closure can not be developed after the fact. Effective project closure is a unique opportunity for the project team to disseminate the lessons learned during the project. Project closure **Should** include development and issue of a 'lessons learned' report on the project.

## PERFORMANCE CRITERIA

This section discusses the internal and external programmatic criteria identified by the project as necessary to successfully accomplish the project and support the overall Site programmatic requirements. It is organized first to discuss external requirements (RFCA Milestones, DOE Performance Measures), and then to discuss project-specific requirements and indicators. Milestones, measures, and indices are integrated with subsequent sections discussing schedules and project controls.

### 4.1 RFCA MILESTONES

The Final Rocky Flats Cleanup Agreement specifies a Vision, objectives, and enforceable milestones for the closure of Rocky Flats under CERCLA and RCRA. This agreement permits the CDPHE and EPA to select RFCA milestones as enforceable milestones for site closure. RFCA Milestones supported by this project include:

- ...
- ...

*Only include this section if the project has RFCA milestones. This section **may** include other project-specific external programmatic requirements or criteria.*

### 4.2 PERFORMANCE MEASURES

This project commits to achieve annual and long-term milestones and performance metrics. These include RFFO Milestones, Regular Performance Measures, and Super-stretch Performance Measures. The listing, completion date, and completion criteria for the Performance Measures are negotiated and updated annually. DOE requires unambiguous measures of performance in order to pay on this basis. Milestone completion reports are submitted as the milestones are achieved. Performance measure milestones supported by this project include:

- ...
- ...

*Only include this section if your project has specific DOE performance measures. This section **may** include other project-specific DOE programmatic requirements or criteria. The PEP **Should** show ties or interfaces that **may** impact important milestones outside the scope of this project.*

### 4.3 PERFORMANCE INDICATORS

The following project-specific performance indicators have been developed to provide several methods to evaluate project performance:

*The project **SHALL** develop appropriate performance indicators based on project needs, activity size, technical risk, and interface with other Site programs. The following are examples of items that **may** be considered:*

**SAFETY PERFORMANCE:** Recordable Case Rate, Lost Workday Case Rate, Lost Workday Severity Rate, Authorization Basis Violations, Radiological Violations, Criticality Safety Infractions and Occurrences, or any other radiological or industrial safety/industrial hygiene indicators.

**COST, SCHEDULE, AND MILESTONE PERFORMANCE:** The project will be expected to report monthly on the performance of project control parameters at the Site Activity ID level. The project may elect to identify select elements at a lower level (e.g. sub-activity schedule milestones, hours expended by specific RCTs) to provide early indication of performance concerns. The project may also identify a lower of cost or schedule variance threshold or evaluate variances at the activity level instead of the lowest Site WBS element.

**ENVIRONMENTAL PERFORMANCE:** NOVs, waste not properly binned, spills to the environment, etc.

PRODUCTION INDICES: This includes elements of "physical work", e.g. lineal feet of piping/duct removed, cubic feet of glove box packaged, cubic meters of building rubble shipped. Indicators of technical quality such as NCRs, specification performance, and reworked items also could be considered.

## PROJECT RISK MANAGEMENT

*This section discusses the organization of the remainder of the section, and identifies any highlights.*

### 5.1 ASSUMPTIONS

Key assumptions pertinent to planning and implementing the [Project Title] project are given below.

- ...
- ...

*Summarize the key assumptions that affect the scope, schedule, and cost estimates for the project. The purpose is to identify assumptions which, if they do not occur, will significantly impact the project's approach or viability. Specific assumptions that affect task budget and schedule are included in the basis of estimate.*

### 5.2 RISKS

Project risk factors that might impact project completion to full scope, schedule, or cost were assessed and, where justified, preventive measures taken or mitigation measures planned. The most basic approach to project risk management uses the potential problem analysis format, presented by the example given in the first table below.

The P column characterizes the risk probability as high, medium, or low, evaluated over the life of the project. Risk events with over a 50% chance of occurrence over the life of the project are rated as High probability. Judge the probability of risk events with less than a 5% chance of happening over the life of the project as Low. The I column categorizes the seriousness of the impacts or consequences of the risk event as High, Medium, or Low. Judge seriousness in terms of the sensitivity of Site critical path and total PMB cost. Events that *may* have a significant effect (e.g., 20% or more) impact on overall RFCP schedule or cost **Should** show High seriousness. The second table identifies the project risks that the project will monitor and consider plans, actions, and costs to prevent and/or mitigate.

Example Project Risk Assessment Table – 444 Cluster Removal Project

RISK FACTOR	ASSUMPTIONS AFFECTING RISK	P	I	Score
1. Technology Risk To Accomplish Scope	a) Unproven and untested technology must be used vs. assumed low-tech, conventional equipment	L	M	L/M
2. Schedule Risk	a) Significant scope requirement is overlooked. b) All work can not be completed during normal day shift hours c) Delivery of critical long lead equipment items delays schedule d) K-H oversight and/or management reviews delay schedule e) There will be delays due to weather f) Recently imposed security requirements will negatively impact schedule g) Integration of Hazard Reduction and Decommissioning activities will impact schedule h) Time/resource requirements for reducing contaminated area will impact schedule	L M L M L H H M	H M M M M H L M	M/M
3. Interfaces	a) Work for others will impact resource availability for Hazard Reduction work b) Work for others will delay Hazards reduction work or characterization in certain areas of the facility	H M	H H	M/H
4. Performance and Procurement Strategy	a) External processing/disposal facility can not be found for non-essential radioactive sources b) Equipment in the non-contaminated areas of the buildings can not be released to PU&D c) Material and equipment requested by LANL can not be stored external to Cluster buildings or shipped directly to LANL. d) Depleted Uranium Stock can not be disposed of as LLW e) Depleted Uranium turnings (chips) can not be recycled f) Depleted Uranium oxide can not be relocated on site or recycled g) Size of the contaminated area can not be cost effectively reduced/PPE requirements relaxed	H L M  M L M M	H H H  H H H M	M/H
5. Estimate Accuracy	a) Greater than 2700 m <sup>3</sup> of removable LLW exists in the 444 cluster b) Less than 2700 m <sup>3</sup> of removable LLW exists in the 444 cluster c) There are 21 sources in the cluster, not 50 as reported earlier	H L H	M L L	H/L
6. Permitting and Regulatory Risk	a) More than minimal permitting and regulatory involvement will be required for Hazards reduction b) NTS will not remain open and accept project remediation waste c) Envirocare will not remain open and accept project LLM d) Areas will not be permitted or available to store Depleted Uranium Oxide (if required)	L L L M	H H H H	L/H
7. Stake-holder involvement	a) There is significant regulatory and stakeholder opposition to Hazard Reduction	L	H	L/H
8. Funding Risk	a) Appropriate funding is not allocated to the project in a timely manner b) A significant scope requirement is overlooked	M L	H H	M/H
9. Labor skills, buildup, availability, training requirements	a) Shortage of manpower, machinery, or subcontractor support services impacts project b) Waste inspectors are not available to support project c) Experience and knowledge base is not maintained for the project d) Resources can not be obtained in a timely manner and in support of schedule e) Resources can not be trained or expedited training can not be obtained to support resource utilization	H M M M M	H M H H H	M/H
10. Magnitude and complexity of contamination	a) Extent of Beryllium of contamination is greater than anticipated b) Extent of radioactive (depleted uranium) contamination is greater than anticipated c) Unanticipated hazardous substances are discovered	L L M	M M M	L/M

H = High or Severe M = Medium or Moderate L = Low

Based on the analysis in the table above, prevention and mitigation options for risk factors with a H/H score were developed and are given in the example table below. These tables will be refined as planning for the project progresses. If the risk factors are still believed to be H/H after further development, then additional planning on secondary alternatives may be indicated.

**Example Potential Problem Analysis Table – 444 Cluster Removal Major Risks.**

Potential Problem	P	S	Prevention	Mitigation
Recently imposed security requirements will negatively impact cost/schedule	H	H	These requirements are in place and impacts can not be prevented for Hazard Reduction. Sufficient resources may be obtained to prevent schedule impact but would increase cost. Actions included in mitigation will prevent impact on Decommissioning activities.	Evaluate impact of requirements and resources required to mitigate impact. Develop a plan and obtain resources to for mitigation (e.g. personnel with security authorization, escorts, etc.). Identify actions required to reduce security requirements (loose material removal and legacy waste repack). Adjust plan and schedule to prioritize these activities to the extent possible to reduce requirements ASAP. Include the mitigation plan in the project work plan.
Work for others will impact resource availability for Hazard Reduction work	H	H	Review available options for work for others. Identify other resources other than those assigned to the 444 Cluster who could be used to perform this work. Identify work locations outside of the 444 Cluster where this work could be performed.	Develop a plan to obtain additional resources to augment existing resources to the maximum extent possible. The plan should identify anticipated work for others, who should be contacted for assistance (Radiological Engineering, Radiological Operations, Health and Safety Professionals, sample collection personnel, sample analysis organizations, etc.), responsibilities, a general plan of action, and applicable RFETS procedures. Include mitigating work tasks in the IWCP as much as possible. Include the mitigation plan in the project work plan.
External processing and/or disposal facility can not be found for non-essential radioactive sources.	H	H	Explore options/solutions on a site wide basis for disposition of sources (e.g. LANL processing of sources) or use project funds to dispose of sources.	Consolidate sources in one location within the cluster to minimize impact on Hazard Reduction and initial Decommissioning activities. Pursue preventative measures indicated to resolve processing disposal issues prior to impact on Decommissioning.
Shortage of manpower, machinery, or subcontractor support services impacts project	H	H	Develop plan and allocate resources to have on stand-by to prevent impact. Have necessary arrangements in place to provide qualified personnel or to train personnel if necessary. Make arrangements for alternative equipment or support services contractors.	Develop a plan to obtain additional resources to augment existing resources to the maximum extent possible. The plan should identify anticipated work, who should be contacted for assistance (Radiological Engineering, Radiological Operations, Health and Safety Professionals, sample collection personnel, sample analysis organizations, etc.), responsibilities, a general plan of action, and applicable RFETS procedures. Include mitigating work tasks in the IWCP as much as possible. Include the mitigation plan in the project work plan.

The above entries are examples only. Replace with entries appropriate for your project. Assure that the prevention and mitigation measures are covered in your plan. The number of H/H problems identified above are the basis for contingency determinations in sections 12 and 13.

## METHOD OF ACCOMPLISHMENT

Project planning, contract monitoring, and closure reporting will be performed by the RMRS project team....

*This section explains how the planning, characterization, decommissioning, demolition, and waste management work will be performed organizationally and contractually. It **SHALL** include the contracting strategy for all the major elements of the project – which items or WBS elements will be performed by Site and/or Steelworker resources, which will be performed by subcontractors, which are expected to be fixed-price, etc.*

*The process for preparation activities such as who prepares any RFP/SOWs, government estimates, etc. **SHALL** be identified, and appropriate elements included in the schedule (see FDPM elements on subcontracting). Explain the rationale for methods selected. For contracts, indicate the contract format, e.g., fixed-price competitive, fixed-rate, CPFF, etc. Indicate any preliminary or final Davis-Bacon determinations. Site organizations or resources that are critical to the project's success and are independent of the project's control (i.e. analytical services, environmental restoration, but not a project-dedicated radiological engineer) **Should** be identified by area or activity.*

*This section **may** also address infrastructure or organizational processes used to perform work; physical processes **SHALL** be discussed under Section 3, Technical Approach. Site infrastructure processes that deal primarily with safety or quality (IWCP, COOP, etc.) **Should** be discussed in Section 7, Environmental, Health, Safety, and Quality, although flow-down requirements to subcontractors **may** be included in this section.*

*Information on the contracting for treatment, storage, disposition, and disposal of waste **Should** be discussed.*

## ENVIRONMENTAL, HEALTH, SAFETY, AND QUALITY

*Identify the specific environmental, health and safety, and quality assurance requirements and considerations for the project. Describe how the team identifies, analyzes, and controls potential hazards in accordance with integrated safety management principles to reduce the risk to human health and the environment.*

### 7.1 ENVIRONMENTAL COMPLIANCE

RFETS is fully committed to regulatory compliance and environmental cleanup and stewardship at RFETS. Activities on this project comply with the requirements of the following (non-inclusive) list:

- Rocky Flats Compliance Agreement (RFCA)
- Price Anderson
- Site Treatment Plan (STP)
- Federal Facility Compliance Agreement (FFCA)
- Residue Consent Agreement
- Toxic Substances Control Act (TSCA)
- Clean Air Act (CAA)
- Clean Water Act (CWA)
- Resource Conservation and Recovery Act (RCRA)
- National Pollutant Discharge Elimination System (NPDES)
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- McKinney Act
- Price-Anderson Amendments Act (PAAA)
- National Historic Preservation Act (NHPA)
- Occupational Safety and Health Act (OSHA)
- National Environmental Policy Act (NEPA)

Compliance with many of the environmental requirements is incorporated within the decommissioning decision documents under RFCA. General information on the development and content of decision documents is addressed in the Decommissioning Program Plan, the RFCA Implementation Guidance Document, and the Facility Disposition Program Manual.

*Describe how the project team will ensure environmental compliance with project-specific requirements over and above those addressed in the project decision documents. Describe decision document approval requirements or reference appropriate sections of the Decommissioning Program Plan (DPP) or FDPM. Compliance with other generic environmental law requirements **Should** be assured by subject matter expert review of the environmental checklist and the PEP, and incorporated into the detail project work plan. This section **may** include any adverse environmental effects that the checklist identifies (e.g. wetlands disturbance) and explain how these will be handled, where there will be a significant difference in the project scope. However, this section does not have to reflect the regulatory analysis provided by the project decision document.*

## **7.2 APPLICABLE REGULATORY REQUIREMENTS DOCUMENTATION**

The Kaiser-Hill contract with DOE specifies the list of DOE directives applicable to work at Rocky Flats. The Kaiser-Hill Level 1 control documents conform to these requirements. All work on the RFCP is performed to appropriate regulations and standards that help protect the environment and health and safety of the workers and surrounding populations.

The project has developed a listing of federal and state Applicable and Relevant or Appropriate Requirements (ARARs). Decommissioning projects at RFETS **SHALL** attain, to the maximum extent practicable, compliance with Federal and State ARARs and incorporate the requirements into the project planning and execution processes. The general ARARs relating to this proposed action are identified in Appendix G, which also identifies whether the requirement is applicable, relevant and appropriate, or To Be Considered (TBC).

Pursuant to RFCA 16.6, the procedural requirements to obtain federal, state, or local permits are waived as long as the substantive requirements that would have been imposed in the permit process are identified (RFCA 17). Furthermore, the method used to attain the substantive permit requirements must be explained (RFCA Section 17c). This information for the project is discussed in the [project decision document].

*Provide a reference to the project-specific regulatory requirements, or key requirements that dictate significant differences between this and other decommissioning projects. This would include specific requirements resulting from approved project RFCA decision documents. Coordinate with Site-wide ARARs under development.*

## **7.3 HEALTH AND SAFETY**

The [Project title] project assures the safety of the workers and the public through the use of the Site infrastructure and organizations supporting this process. In particular, the following processes are used:

### 7.3.1 INTEGRATED SAFETY MANAGEMENT (ISM)

The following sections are provided as examples based on modifications to the Building 776/777 and Building 444 PEP sections. They **SHALL** be modified as necessary to reflect the conditions of individual projects. Example: "The activity screening form has determined that the following WBS elements will require an IHA; the remaining will require only a JHA." "Feedback will be gathered by \_\_\_\_\_, trended by \_\_\_\_\_, and used by \_\_\_\_\_", etc.

Kaiser-Hill implements the ISMS through the IWCP Manual. The project team establishes requirements for individual activity hazards, providing necessary and sufficient controls. They should identify project requirements using the Kaiser-Hill and/or subcontractor manuals and procedures. It is not necessary to re-address the source documents; i.e., DOE Orders, regulations, etc. The Integrated Work Control Process (IWCP) establishes a methodology to help identify needed controls to prevent and/or mitigate identified work hazards. Work execution shall include appropriate graded readiness demonstration. It may range from pre-job briefings (for routine low hazard work) to Operational Readiness Reviews.

Integrated Safety Management is accomplished by the commitment to the following seven guiding principles:

- Line management is responsible for safety.
- Clear roles of responsibilities.
- Competence commensurate with responsibilities.
- Balanced priorities.
- Identification of safety standards and requirements.
- Hazards controls tailored to the work being performed.
- Operations Authorized.

The five core functions of the ISM System are:

1. Define the work scope.
2. Identify and analyze the hazards.
3. Identify and implement controls.
4. Perform the work
5. Provide feedback.

The table below identifies the application of the ISMS process for the [Project title] project. The project management team developed this table and the project baseline plan assumes these processes.

**Example ISM Application to a Decommissioning Project**

Activity type (Note: this example is based on the project WBS)	Work Definition Process	Hazard Analysis Process	Control Process (Includes Readiness Demonstration)	Work Performance Process	Feedback Process
Routine maintenance	MAL ISM	N/A	Pre-job briefing POD	1-G32-IWCP-5	1-MAN-013-SIOM ISM
Contamination zone characterization	IWCP RadCon Manual	SME review	Team hazard assessment POD Pre-job briefing	COOP	1-MAN-013-SIOM ISM



Activity type (Note: this example is based on the project WBS)	Work Definition Process	Hazard Analysis Process	Control Process (Includes Readiness Demonstration)	Work Performance Process	Feedback Process
Excess Chemical Roundup/Sampling/Consolidating/Removal	MAL IWCP RadCon Manual	SME review	POD Pre-job briefing	Chemical Management Manual	1-MAN-013-SIOM ISM
Equipment De-Energization/Isolation	IWCP HSP 15.00	SME review	Team hazard assessment Readiness demonstration	COOP	1-P45-MA-001 1-MAN-013-SIOM ISM
Equipment Fluid Draining	IWCP RadCon Manual WSRIC WGI	SME review	Team hazard assessment POD Pre-job briefing	COOP	1-MAN-013-SIOM ISM
Contaminated equipment dismantlement *	IWCP Configuration Control RadCon Manual	Activity Control Envelope	SAR review Team hazard assessment POD Pre-job briefing	COOP	1-MAN-017-LL/GI-RM 1-MAN-013-SIOM ISM
Movement/Hoisting/Rigging/Packing/Blocking & Bracing of material and Equipment	IWCP WSRIC WGI	SME review DES-210	Team hazard assessment POD Pre-job briefing	COOP	1-MAN-013-SIOM ISM
Waste Removal/Packing including repackaging	IWCP WSRIC WGI	SME review	Team hazard assessment POD Pre-job briefing	COOP	1-MAN-013-SIOM ISM

\*Dismantlement of equipment will be dependent upon disposal method selected and therefore packaging requirements.

The following programs will be invoked on this project consistent with the Site infrastructure:

- The Criticality Safety Program is established by the Nuclear Criticality Safety Manual and will be implemented in accordance with the Department of Energy approved Rocky Flats Environmental Technology Site Implementation Plan for the Nuclear Criticality Safety Manual.
- Site standards for Radiological Protection are defined in 10 CFR Part 835 and are implemented by the Radiation Protection Program.
- Operational Safety is accomplished through the Conduct of Operations Manual (COOP), Fire Protection, and Industrial Safety Programs.
- The Fire Protection Program is implemented by the relevant sections of the HSP Manual, which include Fire Protection Policy, Programs, Organization, Fire Prevention, Fire and Life Safety, Building and Facility and Fire Protection.
- Standards for Construction Safety and Industrial Safety are found in 29 CFR Part 1910 and 29 CFR Part 1926. DOE orders and are implemented by the relevant procedures of the Site Health and Safety Practices Manual and the Site Occupational Safety and Industrial Hygiene Program Manual based on the hazards of the work on an activity by activity basis.

Operation managers use Work Control to plan and authorize existing and emergent activities for placement on the Plan of the Day (POD). Thus, Work Control is an integral part of daily operations

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within the facility and is an effective tool for preventing accidents by ensuring that no unanalyzed or unauthorized work is performed. Work Control provides a disciplined approach to defining and evaluating the hazards prior to the performance of new activities. To ensure safe performance, each emergent activity is defined and a graded hazard assessment is performed, as necessary, to establish appropriate procedure level controls and to verify the adequacy of the facility level control set established by the Authorization Basis (AB). If the activity and its hazards are not within the scope of the AB, the USQD process is invoked. Work Control is implemented by the Activity Definition Process and the COOP Manual.

### 7.3.2 INTEGRATED WORK CONTROL PROGRAM (IWCP)

Definition of any given scope of work is accomplished primarily through the Integrated Work Control Program. Engineering documentation defines the technical work scope for decommissioning activities, and the IWCP work packages or operating procedures define the specific planned work scope. The physical work scope has been defined in the set descriptions and end point criteria.

The IWCP process defines the hazards analysis approach to be used in planning a decommissioning activity including hazard identification, walk-down of areas and systems, and incorporation of worker safety hazards analysis using appropriately skilled safety professionals. For this project, the initial process of documenting the physical hazards and contaminants of concern for each set, establishing initial controls and developing the activity hazards analysis is discussed in the project Health and Safety Plan.

The development and implementation of operational controls are typically derived from the hazards analysis and transferred into work control documents. The IWCP process governs this function for decommissioning activities through the development of specific controls, such as radiological controls defined in a Radiation Work permit (RWP). The IWCP process also specifies post decommissioning testing requirements based on technical input from engineering. Ultimately, the process requires a Unreviewed Safety Question Determination (USQD) and independent safety review(s) where appropriate.

The performance of work is controlled through the Operational Safety Programs (e.g., Conduct of Operations, Section 3.2.6.1), Work Control Documents and Training Programs, and the management, Organization, and Institutional Safety provisions (e.g., Configuration Management) Programs. Specific activities scheduled on the Plan of the Day (POD) are preceded by a pre-evolution briefing and are formally released by the Work Authorization team prior to performance. Only appropriately trained personnel perform the activity. Depending on the type of activity, core team members and building support personnel may receive a pre-evolution briefing to include a pre-defined or practiced set of responses to upset conditions.

Finally, feedback and improvement from performance of work or an operation are elements of Quality Assurance, including Management Assessment, the management Organization and Institutional Safety Provisions Program. The IWCP work packages are formally closed out and reviewed by the Operations Manager. Engineering documentation also receives a formal close out.

### 7.3.3 HEALTH AND SAFETY PLAN (HASP)

The [Project title] project has developed a Health and Safety Plan (HASP) to cover hazards reduction and decommissioning activities. This HASP will be used in conjunction with the RMRS HASP, the Site Health and Safety Practices Manual, and the Site Occupational Safety and Industrial Hygiene Program

Manual in planning and performing activities. The HASP is not intended to be a stand-alone document governing decommissioning activities, but as guidance to be used during the Enhanced Work Planning activities and the generation of the Activity Hazards Analysis.

The HASP (Appendix E) includes the Preliminary Hazards Analysis (PHA) that was developed based on generic activities taking place during hazards reduction and decommissioning. This PHA documents the hazards identification process for operational activities anticipated to be performed during closure. The PHA is used along with the Reconnaissance Level Characterization and in-process characterization to generate the detailed Activity Hazards Analysis for individual tasks.

#### **7.4 QUALITY ASSURANCE**

The project applies the overall Site infrastructure and quality program to assure compliance with Site and project safety, environmental, waste disposal, and similar requirements. The project [does/does not] require a project quality assurance program plan to extend the Site requirements to the project activities.

*The project **Should** identify the quality requirements for the following functions: waste characterization and management, authorization basis, design, etc. If a project specific program plan is not required, then this section must reference the appropriate Site documentation.*

##### **7.4.1 QUALITY MANAGEMENT**

The Site Quality Assurance Program (QAP) defines the quality management system for the Site. The system includes assignment of responsibility for quality, the governing quality documents, and the different roles—management, performance, and assessment—to obtain and ensure quality performance and product. The application and implementation of these criteria into items and services shall be consistent with the graded approach. The QAP is consistent with DOE Order 5700.6C and 10 CFR 830.120.

Kaiser-Hill uses a comprehensive set of written policies and procedures to guide work performance. The QAP Infrastructure Document List relates these policies and procedures to specific quality requirements. It also designates the organization responsible to generate and maintain the document.

Specific quality requirements for this project are....

*Identify the project-specific quality requirements and how the project team will implement them. Include discussion here or reference to a project-specific quality assurance program plan (QAPP or QAPIP, as appropriate). Do not list all the world's codes and standards, or all of the ones covered through Site programs. Only list those of special importance to the project, which may be needed to draw attention to for the project team.*

*The project **may** invoke portions of one more external QAPPs in this section as required by the scope of the work. This is usually best accomplished using a matrix here or with a project specific QAPP. Either method must include the following; either by description or reference:*

- *Invoke the Quality Assurance infrastructure documents and other quality requirements documents as applicable to the project.*
- *Invoke the requirements of applicable codes, standards, and other regulatory requirements.*
- *Invoke additional quality assurance requirements as required by contractual commitments and/or Company management.*
- *Identify the specific groups directed to perform tasks on the project, define their respective quality assurance responsibilities, and delegate the authority to accomplish these tasks.*

- Define the method and process by which participating organizations interface for quality-affecting functions.
- Identify the structures, systems, components, and related activities that are within the scope of the quality assurance program.
- Establish the effective date and document the changes in the QAPP.
- Identify the procedures that implement compliance with the applicable sections of the QAPP, and any special quality assurance requirements.
- Assure that the QAPP is distributed to and maintained by organizations having assigned project responsibilities.

#### 7.4.2 Records Management Procedures

RFCSS provides the Site's Document Control and Records Management programs and services, with oversight by Kaiser-Hill. Kaiser-Hill provides Engineering Document Control. Principal subcontractors are responsible for adhering to the Site Document Control and records Management Programs. Specific requirements applicable to this project are discussed below.

*Describe any project-specific records management procedures in this section. If a project document hierarchy is developed to assist in the planning process, it should be referenced or provided as an appendix. The Matrix of Project Strategies, Plans, and Deliverables, Appendix A-1 of the FDPM, Should be used to establish what documents are needed for project files, controlled documents, and administrative records. The FDPM, Section 3.3.4, discusses the records requirements for the following classes of documents: Administrative Record, Project Files, Meeting Minutes/Contact Records, Document Development and Review, Project Controls and Reports, Other Document Control. Project-specific deviation from these requirements should be identified.*

*Note: Site-wide documents which should be consulted in determining project-specific requirements include: The Correspondence Manual and procedure 1-11000-ADM-003, Correspondence Control Program, (describe how to control documents); MAN-063-DC, Document Control Program Manual, (describes how the Kaiser-Hill Team controls records, and establishes the requirements and responsibilities of Site record sources for the identification, generation, correction, authentication, protection, and turnover of records for all media); and the RFCA Implementation Guidance Document (discusses the management of records required by the regulatory process and the Administrative Record).*

### WASTE MANAGEMENT AND MINIMIZATION

*This section discusses the organization of the remainder of the section, and identifies any highlights.*

#### 8.1 WASTE MANAGEMENT

The [Project title] project is supported by a project-specific Waste Management Plan (Appendix E). This plan provides the details of the waste estimate for the project, and details of the specific disposition pathways necessary to remove the waste from the Site. The lifecycle project waste generation estimate is given in the table below:

**[Project title] PROJECT LIFECYCLE WASTE GENERATION ESTIMATE**

Category	Sub-Category	As-shipped Volume (M3)
TRU		
	TRU	
	TRUM	
	Residue	
	TRU-Liquid	
Low-Level		

Category	Sub-Category	As-shipped Volume (M3)
	Low-Level (inc. non-friable asbestos)	
	LL-Friable Asbestos	
	LL-Structural Debris	
	Surface Contaminated Objects	
	Cont. Recycle Metal	
	LL-TSCA(PCB)	
	LLW-Liquid	
Low-Level Mixed		
	LL-RCRA	
	LLM-Liquid	
Non-Rad/ Regulated (Hazardous)		
	RCRA	
	TSCA(PCB)	
	Friable Asbestos	
	Hazardous-Liquid	
Sanitary		
	Routine/Non-Routine Sanitary	
	Rubble/Structural Construction Debris	
	Non-friable asbestos/Spec. Sanitary	
Other		
	Salvage/PU&D (pieces/volume)	
	Non-contaminated Scrap Metal/ Other Recycled Materials	

*This section provides the waste estimate based on Appendix 1 of the Waste Management Plan (WMP) Guidance, and discusses any specific issues specific to the project, such as waste generated that has no identified disposition path, work or treatment required to be performed by others, etc. Details of the estimate and specific issues should be referred to in the WMP. The WMP will also include information on economic analysis of TRU decontamination/volume reduction, and property disposal by free-release vs. disposal as waste.*

## 8.2 WASTE MINIMIZATION

*This section will discuss the approach and elements of waste minimization which will be practiced by the project. These may include segregation of wastes where cost effective to avoid generating greater volumes of a more difficult to handle or dispose of material than necessary (e.g. removal of lead from gloveboxes), recycling of contaminated metal, maximization of waste in a disposal container, etc.).*

## STAKEHOLDERS

Stakeholder involvement in this project is legally mandated and is the policy of the DOE. Stakeholders include regulators, the public, project workers (including subcontractors), and anyone affected by the project. The Rocky Flats Plant Public Involvement Plan<sup>1</sup> specifies the approach to overall community involvement. Some activities, such as NEPA and CERCLA compliance (through RFCA) have other specific requirements. Specific activities that involve public comment on decision documents under RFCA are covered in Section 7, Environmental, Health, Safety, and Quality and reflected in the WBS Dictionary for those scope elements and the schedule.

The purpose of stakeholder involvement is to provide a forum for collaboration with the project team to develop and endorse the project decisions early in the process. Involvement occurs at the Site level, Closure Programs Integration level, and at the project level.

<sup>1</sup> Rocky Flats Plant Community Relations Plan, U.S. Department Of Energy, December 1, 1991

*This section **Should** describe how the project ties into the overall stakeholder and public involvement plans for the site, and any unique factors for this project. It **Should** generally discuss how the involvement proceeds at different phases of the project, including initial collaboration on early decisions and ongoing collaboration during project execution. This section **Should not** repeat site-wide stakeholder communication activities, but rather show how this project ensures that it is covered by these activities.*

## ORGANIZATION AND RESPONSIBILITIES

This section first discusses the organizations with which the project typically interacts and their general responsibilities, followed by a detailed description of project organization, team member responsibilities, and detailed interface responsibilities between the project and other Site organizations.

*This section describes the project organization structure, functions, and interfaces. The organization chart(s) have two purposes: to define the lines of authority external to the (typically RMRS) Project Manager, and define the project team reporting to the (typically RMRS) Project Manager. This can be done in one or more charts; the example shows two. Key positions defined by the project **may** include: applicable vice president, project manager, project engineer, lead designers, subcontract administrator, construction coordinator, and other key support personnel, and a description of duties and responsibilities for each.*

*For organizational interfaces identified, there should be a specific individual from the listed organization responsible for that interface. A project team list, including interface individuals from outside organizations, should be maintained and added as an appendix.*

*This section provides a number of examples as to the level-of-detail required for the sections, not necessarily the organizational relationships required for a specific project.*

*As significant work is identified that will be subcontracted, the relationship to the project team and the subcontractor(s) need to be defined. If necessary, include or reference an organizational breakdown structure (OBS), and a responsibility assignment matrix (RAM).*

### 10.1 GENERAL RESPONSIBILITIES

#### Internal Organizations (EXAMPLE)

The general responsibilities for the internal organizations are as follows:

Organization	Responsibilities
DOE	Enforcement of government regulations. Communications with Site external organizations regarding the closure program. Oversight of Closure Operations Communications with IMC of external and RFFO inputs, including funding and overall direction. Interfacing with other regulatory agencies, stakeholders, and the public.
Integrating Mgmt. Contractor (IMC)	Communications with DOE-RFFO and the public regarding closure program status. Integrated management of the closure program including program and subcontractor funding and guidance.
Subcontractors	IMC will approve and forward the appropriate documents to DOE-RFFO. Communications with IMC and employees regarding the performance and status of the closure program. Demonstrating that alternate methods of performing closure activities comply with regulatory requirements. Performing closure activities.

Submittal of the closure documentation.

**External Organizations (EXAMPLE)**

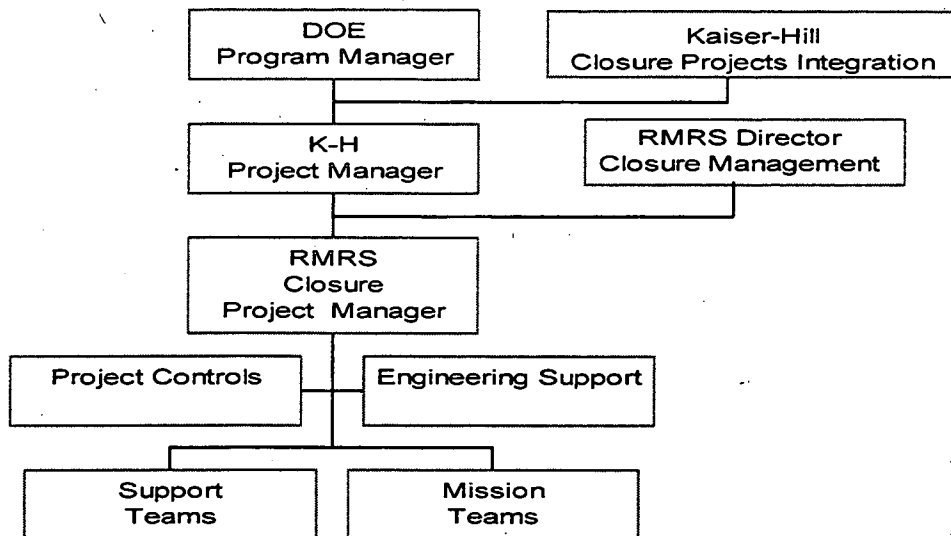
The external organizations with major interests in the Site closure have prepared a MOU- Memorandum of Understanding Governing Regulation and Oversight of Department of Energy Activities in the Rocky Flats Environmental Technology Site Industrial Area. A summary of those interests is presented here. Refer to the MOU for further clarification of the responsibilities of DOE, DNFSB, EPA, and CDPHE.

Organization	Responsibilities
Colorado Dept. of Public Health and Environment(CDPHE)	Regulatory oversight of RCRA related activities.
Defense Nuclear Facilities Safety Board (DNFSB)	Independent oversight of all activities affecting nuclear safety.
Environmental Protection Agency (EPA)	Enforcement of environmental laws not delegated to the State of Colorado.
Other organizations as necessary (Fish and Wildlife, HUD, GSA, State Fish and Game, Jefferson County, RFLII, CAB, etc.)	

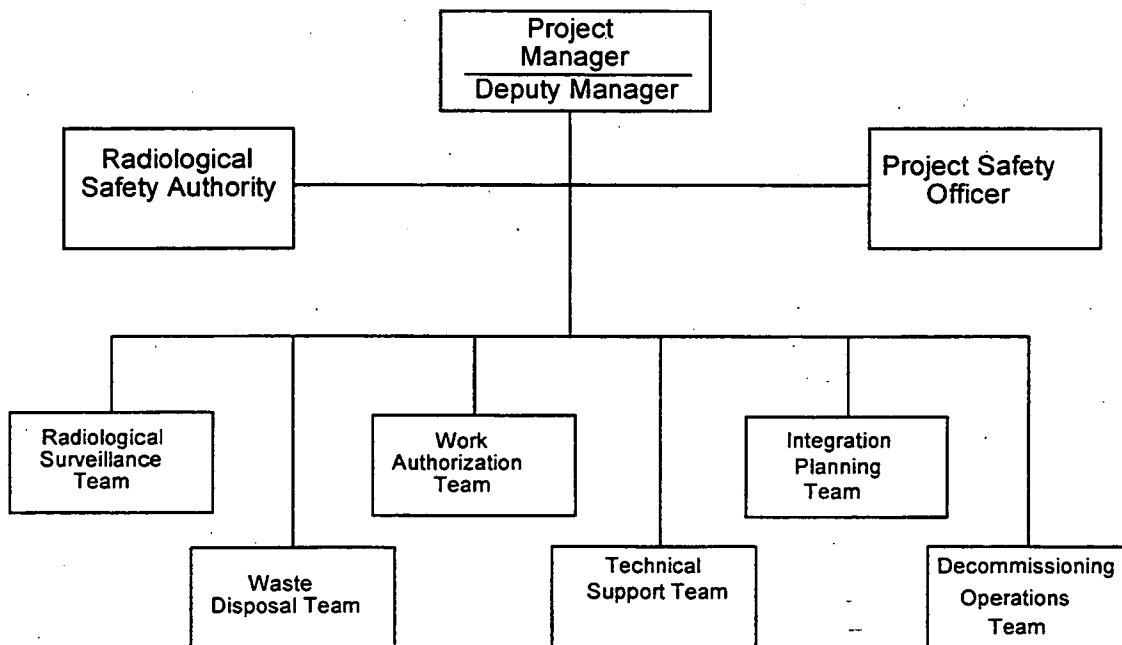
**TEAM ORGANIZATIONAL STRUCTURE (EXAMPLE)**

Program management and control will function under an integrated scope, schedule, and cost control system that identifies responsibilities and interfaces. This control system, along with the planning and estimating practices are described in general in the FDPM. The project organization, under the direction of a project manager, is an integrated team of qualified individuals for each project. This team will consist of personnel from a number of the K-H team subcontractors, although primarily RMRS. The current organization structure will be transitioned during the deactivation phase in the building and will be implemented prior to the start of decommissioning.

### EXAMPLE PROJECT ORGANIZATIONAL CHAIN



### Example Project Organization Structure and Functions



#### 10.3 RESPONSIBILITIES (EXAMPLE)

The detailed roles and responsibilities of the positions are included below. In brief there is a clear line of responsibility from the Integrator to the Closure Project Manager, through the Work Release Manager, to the Execution Project Managers, and finally to the Enhanced Worker Teams.

*There **Should** be a description of responsibilities for the Organizational Chain chart equivalent to the discussion of the Organization Structure and Function chart below.*

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- The Project Manager is the primary Integrator among all programs and clusters for the Project. The Director ensures funding is available to accomplish desired tasks and validates schedules.
- The IMC Project Engineer assists the Project Director in overseeing RMRS operations for the Project from a technical and regulatory perspective. The Project Engineer provides integration of technical activities through assistance in determination of priorities and resolution of emergent technical issues.
- The IMC Project Baseline Summary Manager establishes baseline project work plans, DOE budget submissions, monitoring and controlling project cost/schedule execution, and recommending project recovery strategies. He is assisted by the IMC Project Control Integrator.
- The Subcontractor Closure Project Manager is the senior leader of the closure project and has the responsibility to set expectations for performance, establish principles of behavior, and provide the primary senior external interface for the Closure Project.
- The Work Authorization Team Leader is the focal point who maintains the safety and regulatory envelope for the project. This person provides the primary external interface to the site-level safety and regulatory direction and is the link to the conduct of operations improvement. It provides the project constraints to the Project Execution Managers and then gives the day to day authorization to proceed with work similar to the function currently provided by a shift manager.
- The Integration Planning Team Leader is the primary interface to external organizations that are working on the Protected Area execution plan and the Ten Year Plan. Within the Closure Project this person has the responsibility to maintain the Project Closure Plan and to coordinate the distributed planning resources. The plan includes the entire closure project, the three year plan, as well as the annual, monthly, and weekly plans. The resource needs must be projected to allow adequate time for the Technical Support Manager to acquire the resources for distribution to the Project Team Leaders.
- The Project Team Leaders are key to executing the defined project work scope. The work scope definition comes from the Project Integration Manager. For example, a Project Team Leader would be assigned to glovebox removal or to excess equipment removal.
- The Technical Support Manager is responsible for filling a number of resource needs of the Project Team Leaders as predicted by the Integration Planning Team Leader. These resources include all technical aspects including Nuclear Safety, Criticality Safety, Environmental Safety, Engineering, etc. This person is the focal point for setting resource priorities. The Closure Project Manager sets the absolute Priorities.

The Contract Work Breakdown Structure (CWBS) assigns responsibility to a person for each element on the WBS. The responsibility depends on the level of the WBS. Managers at the lowest level of the WBS have the responsibility to plan and perform the work in the work package, and to report progress. They can authorize changes in the details of the work package that do not affect the PMB or Performance Measures. Changes that meet the Baseline Change Process thresholds must follow the BCP process, as described in P&I Work Instruction INST-002. The WBS dictionary, Appendix A, contains the responsibility assignments for the project team members. The project team and all individuals with assigned responsibility have reviewed and agreed to the assignments.

#### **10.4 TEAM INTERFACES (EXAMPLE)**

##### **Interfaces with other projects include:**

- Project No. 02 "Waste Management Project" that affects Building 776/ 777 consists of WPD #62 "Sanitary Waste Management " and includes management of LLW/LLM waste. WPD #4 "TRU/TRM Storage" includes Venting and Aspirating and management of TRU/TRM waste. WPD #7 "Waste Treatment Project" provides the necessary waste treatment capabilities.

Venting and Aspirating drums may be required on an as needed basis. The size reduction airlock may be utilized for characterization and repackaging. Headspace (WIPP) gas sampling, evacuation of TRU and low level drums, and some glove washing will occur.

- Project No. 06 "SNM Consolidation Project" that affects Building 776/ 777 consists of WPD #10 "Pu Storage Project" and includes the scope of consolidating plutonium.
- Project No. 08 "Pu Metals and Oxides Stabilization Project" that affects Building 776/ 777 consists of WPD #21 "SNM Processing" and includes the scope of ensuring compliance with HSP 31.11.
- Project No. 09 "Pu Liquid Stabilization Project" that affects Building 776/ 777 consists of WPD #15 "Residue Sampling" and includes characterization and storage of residues.
- Project No. 11 "Uranium Disposition Project" that affects Building 776/ 777 consists of WPD #17 "Uranium Decontamination" which includes decontaminating parts stored in Building 776/ 777.
- Project No. 12 "SNM Shipping Project" that affects Building 776/ 777 consists of WPD #22 "SNM Shipping Project" which includes the scope related to shipping material off site.
- Project No. 23 "Utilities and Infrastructure Project" that affects Building 776/ 777 consists of WPD #39 "Utilities Projects" which provides utility services. This effort will continue through D&D. WPD #40 "Infrastructure Project" provides site wide infrastructure.
- Project No. 24 "Safeguards and Security Project" that affects Building 776/ 777 consists of WPD #60 "Safeguards and Security Project" which provides safeguards and security support.
- Project No. 27 "Analytical Services Project" that affects Building 776/ 777 consists of WPD #41 "Analytical Services Project" which provides analytical laboratory support.

**Interfaces with other Site organizations include:**

- Site Operations and Integration – *name*
- Planning and Integration– *name*
- Safety Systems and Engineering– *name*
- Environmental Systems and Stewardship– *name*
- Closure Projects– *name*

**Interfaces outside of the Rocky Flats organizations include:**

- Colorado Department of Public Health and Environment
- Environmental Protection Agency
- Citizens Advisory Board
- Defense Nuclear Facility Safety Board

**Interfaces with DOE include:**

- Material, Stabilization & Disposition Division
- Planning and Integration

**10.5 SUBCONTRACTOR'S INTERFACES**

*This section defines the interface between the Kaiser-Hill [project title] project management team and subcontractors, fixed-price contracts, etc.*

**PROJECT WORK BREAKDOWN STRUCTURE**

All work at Rocky Flats is organized in accordance with the Integrated Site Work Breakdown Structure (Site WBS). This WBS covers the entire Rocky Flats Closure Project through the completion of Site closure. The Project WBS and its associated WBS Dictionary provide the project framework for definition, management, and control of the project, and show how the project fits together.

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The figures [shown in PEP Template, Attachment 1] provide examples of the portion of the Site WBS that defines the scope of work of the [Project Title] project, and also show the project's extension of the Site WBS to the level-of-detail the project determines is necessary to ensure adequate control. The project WBS Dictionary (Appendix A) extends the work scope definition to at least the lowest level of the Site WBS element, and shows the work scope for the additional project WBS elements as necessary.

The project WBS defines the cost and technical scope roll-up for the project, and is supported by a project-specific system of cost codes which will allow the actual costs to be captured for project control purposes. WBS responsibility is assigned using the CWBS which indicates the individuals responsible for the lowest CWBS elements.

*The purpose of this section is to explain the WBS structure, identify reporting levels to the Site system, identify WBS elements which require more detailed definition and control. The project may distinguish between single-year, level of effort, and life-cycle WBS elements; WBS elements or sub-elements which are forecast vs. authorized, etc.*

*The lowest-level Site WBS element will contain one or more Activities (as defined in the BEST system for costing and scheduling purposes). These Activities **Should** be considered in extending the WBS on a project-specific basis if the project is attempting to plan work, and track costs and earned value at a lower level than the Site WBS.*

*The WBS diagram shown in Attachment 1 to this document is the preferred method to diagram the WBS organization; however, a table similar to that shown in Section 12, Budget, below may be used.*

*The WBS Dictionary **SHALL** identify appropriate activity endpoints, or identify when the appropriate endpoint will be defined (i.e. after which other project activity is completed). It **SHALL** include other programs (including deactivation activities) which are occurring concurrently in the building, or explicitly describes the interfaces between activities of different programs. The project milestone, cost and schedule data **SHALL** tie to the project WBS.*

*The following Decommissioning Work Breakdown Structure (WBS) **SHALL** be used for all facility disposition projects, unless granted an exception by D&D Projects. If a facility disposition project contains more than one building, then the WBS is applied to each separate building. In the event that this WBS is not used by the project, the cost estimates and actual costs collected **SHALL** reference to these categories.*

... Cluster XX.04.YY.01	Planning and Engineering, Building YY Decommissioning
... Cluster XX.04.YY.02	Characterization, Building YY Decommissioning
... Cluster XX.04.YY.03	Site Preparation, Building YY Decommissioning
... Cluster XX.04.YY.04	Decontamination, Building YY Decommissioning
... Cluster XX.04.YY.05	Dismantlement, Building YY Decommissioning
... Cluster XX.04.YY.06	Demolition and Disposal, Building YY Decommissioning
... Cluster XX.04.YY.07	Project Management, Building YY Decommissioning
... Cluster XX.04.YY.08	Support Services, Building YY Decommissioning

## BUDGET

The [Project title] project life-cycle budget is shown in the table below. WBS elements in **bold** are included in the Site WBS; un-bold elements are extensions of the Site WBS within the project WBS.

**Example Life Cycle Estimate – 444 Cluster Removal Project**

WBS Element	Activity Title	Thousands of Dollars
1.1.05.10.01	444 Cluster landlord functions	6,836
1.1.05.10.01.01	Compliance surveillance, Landlord	0
1.1.05.10.01.02	Baseline maintenance, Landlord	0
1.1.05.10.01.03	Operations Management, Landlord	0
1.1.05.10.01.04	Technical Support, Landlord	0
1.1.05.10.02	444 Cluster stabilization/Hazard Removal	4,285
1.1.05.10.02.01	Combustible removal, Stab/Hazard Red	149
1.1.05.10.02.02	Chemical Removal, Stab/Hazard Red	180
1.1.05.10.02.03	Equipment removal, Stab/Hazard Red	149
1.1.05.10.02.04	People & Source Removal, Stab/Hazard Red	85
1.1.05.10.02.05	Process Equipment Deactivation, Stab/Hazard Red	424
1.1.05.10.02.05.01	De-energize Process Equipment	210
1.1.05.10.02.05.02	Drain Process Equipment Liquids	194
1.1.05.10.02.05.03	Apply Fixative Process Equipment	20
1.1.05.10.02.06	Depleted Uranium Removal, Stab/Hazard Removal	117
1.1.05.10.02.07	Legacy Waste Removal, Stab/Hazard Removal	405
1.1.05.10.02.08	Waste Packaging & Removal, Stab/Hazard Removal	600
1.1.05.10.02.09	Reduction of Contaminated Area, Stab/Hazard Removal	135
1.1.05.10.02.10	Project Mgt. & Planning, Stab/Hazard Removal	1,965
1.1.05.10.02.10.1	Project Mgt, Project Mgt. & Planning	120
1.1.05.10.02.10.2	Support Services, Project Mgt. & Planning	1,752
1.1.05.10.02.10.3	Planning, Project Mgt. & Planning	73
1.1.05.10.02.10.4	Hazard Reduction Closeout activities	20
1.1.05.10.02.10.5	Reserved	0
1.1.05.10.02.11	Work for Others	119
1.1.05.10.03	444 Cluster Deactivation	0
1.1.05.10.04	444 Cluster Decommissioning	23,624
1.1.05.10.04.01	Decommissioning Building 427	0
1.1.05.10.04.02	Decommissioning Building 427A	50
1.1.05.10.04.03	Decommissioning Building 444	19,669
1.1.05.10.04.04	Decommissioning Building 444A	40
1.1.05.10.04.05	Decommissioning Building 445	52
1.1.05.10.04.06	Decommissioning Building 447	3,344
1.1.05.10.04.07	Decommissioning Building 448	52
1.1.05.10.04.08	Decommissioning Building 449	132
1.1.05.10.04.09	Decommissioning Building 450	105
1.1.05.10.04.10	Decommissioning Building 451	65
1.1.05.10.04.11	Decommissioning Building 453	10
1.1.05.10.04.12	Decommissioning Building 454	24
1.1.05.10.04.13	Decommissioning Building 455	65
1.1.05.10.04.14	Decommissioning Building 457	16
1.1.05.10.05	444 Cluster Closure	18
1.1.05.10.06	Remediate/Contain 444 Cluster High Risk IHSSs	3,990
1.1.05.10	<b>TOTAL</b>	<b>38,752</b>

*The project team creates the overall life-cycle budgeted cost of work scheduled (BCWS) for the project. The BCWS derives from the BEST database. The database represents the official cost estimate for the project. If necessary, identify BCWS by source of funds (e.g. EM-50).*

### **12.1 BASIS AND VALIDATION**

Project cost estimates are included in the BEST database, which integrates all of the Site's baseline cost and schedule data. All cost estimates within BEST have been independently validated through a Site-wide validation process. In addition, the project cost estimate was benchmarked against the Facility Disposition Cost Model.

Appendix C, Project Cost Estimate, provides a detailed breakdown of the project cost at the Activity level. The details of the basis of estimate are available within the BEST program itself. A detailed list of cost assumptions (extensions of the programmatic assumptions in Section 5, Project Risk Management) is also given in Appendix C.

*Identify the source of information for the project cost and schedule estimates, and the reliability in those estimates. The cost estimates must include estimates of the lowest Project WBS elements and show their roll-up into the Site WBS elements shown in BEST.*

### **12.2 FINANCIAL WORK AUTHORIZATION**

*Describe the process for financial authorization of work within the project. This should include internal authorization based on BCP activity. General information is provided below:*

*The Kaiser-Hill project control system uses three levels of authorization. (1) Work authorization from RFFO to Kaiser-Hill is typically performed once annually at the beginning of the new fiscal year by issuance and approval of a WAD. During the year, Kaiser-Hill may receive additional funding authorization by the release of incremental funding or as the result of a Site Change Control Board (SCCB) action. (2) Kaiser-Hill issues work authorization to the prime subcontractors through a contract modification referred to as a "Procurement Authorization Document," or PAD. (3) Authorizations to so-called 3<sup>rd</sup> tier subcontractors take the form of purchase orders, with each purchase order establishing work scope, terms and conditions, and authorized cost.*

*The work scope and funding authorized by the WAD is applied against the project WBS structure, typically at the project level, and becomes the basis for the annual update to the project cost plan and BCWS estimate. The Kaiser-Hill Project Manager (and/or WAD Manager) is responsible for determining the WBS elements against which the PAD authorization will be applied, how much funding will be authorized, and the appropriate levels of management reserve. The PAD is typically issued at the lowest work breakdown structure level by which Kaiser-Hill expects to collect and accrue costs. The subcontractor's ability to incur costs is limited to the amount of the PAD.*

### **12.3 BUDGET CONFIDENCE DETERMINATION**

When detailed planning for the Hazards Reduction has been completed, the risks associated with Hazard Reduction will be assessed to determine a Target and Commitment EAC. Once the risks have been assessed, the number of risk events with high probability of occurrence and high impact will be tabulated. Multipliers will be determined using the following table based on the number of high/high risk (H/H) elements identified in Section 5.2.

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EAC Cost Scaling Factors

HITS(H/H)	BASE PROBABILITY ( $E_B$ )	BASE EAC MULTIPLIER ( $E^x$ ) FOR 75% CONFIDENCE EAC
10	10	2.178
9	20	1.651
8	30	1.443
7	40	1.286
6	45	1.252
5	50	1.215
4	55	1.179
3	60	1.138
2	65	1.094
1	70	1.049
0	75 (Target)	1.000

Target and Commitment EAC will be calculated using the following formulas:

Target EAC = Base EAC x  $E^x$

Commitment EAC (90% confidence) = Target EAC x 1.149

## PROJECT SCHEDULE

Project schedules are created, maintained and statused with Primavera Project Planner (P3). This integrated project plan and management tool aids the project team in defining and controlling to the critical path schedule. The lowest level of the WBS has clearly defined inputs and outputs. The activities that comprise the lowest WBS element process the inputs to create the deliverable result.

*Identify the various levels and purposes of project schedules. The project execution plan schedule **Should** be the Target [CPB-T] schedule for the project; and **may** contain a Working [CPB-A] schedule (included as a second set of activities displayed on the Target schedule) if necessary to explain significant deviation from the Target schedule. This schedule **Should** contain a one-page roll-up schedule summarizing the major project activities, included either at the beginning of Appendix B or in this section.*

### 13.1 PERFORMANCE MEASUREMENT BASELINE SCHEDULE

Appendix B contains the project summary schedule at the project summary WBS level of detail. It aligns with the Closure Project Baseline (CPB) schedule.

*Define the detailed process that the team will use to extend the scope definition process to create a baseline schedule for the project that will roll up to the CPB (or, Performance Measurement Baseline [PMB]) activities. Identify the process for changing the schedule. Statusing the schedule (i.e. making changes to the project schedule that rolls up to the CPB-A Working schedule) **Should** be covered in Section 14, Project Controls, Reporting, and Documentation. The section should identify the approach that the project will use to develop and resource load the schedule, and establish the hammocks that will allow roll-up to higher-level schedules (i.e. work areas and/or SETs). General information is provided below:*

*The CPB includes the life-cycle schedule of all the work scope included in the Focus on 2006 Plan. The schedule detail reflects the "Rolling Wave" method of scheduling, which produces a decreasing level of detail as time is extended from the current Fiscal Year (FY). The current year CPB-T Target schedule at the start of the fiscal year (which, when integrated with the baseline cost data become the PMB) is the initial baseline plan for performance measurement. It only may be modified through the year by approved BCPs. This CPB-T schedule rolls up project detail (working) schedules and contains one or more activities for each WBS line reported in the project performance report. The project detail working schedules are used by the project for daily management of the work (reference Section 13.2, Working Plans).*

*The CPB schedule is developed as the project is developing the preliminary scope, and is revised on a yearly basis during the preparation for the next year's budget. Subject Matter Experts (SMEs) and Schedule*

Analysts expand the scope into Activity Detail Forms. These forms are grouped by WBS element, and schedule logic and duration is applied. The preliminary schedule is then assembled and updated, as appropriate, as pertinent information is received. This is an ongoing process until the schedule is baselined. At that time, a critical path can be extracted and the schedule can be tracked.

The project team **Should** develop the CPB with high probability activity estimates. That is, the CPB activity duration estimates are made up of activities with a better than 80% probability of completion within the scheduled activity duration when required resource levels are allocated and maintained.

### 13.2 WORKING PLANS (EXAMPLE)

The working level schedule, which contains detailed scope elements to the lowest level of the Project WBS, is used to track day-to-day progress. Plan-of-the-Day (POD) meetings are used to integrate the project schedule with Facility Management's Plan-of-the-Day format to authorize work in the cluster. In this way, the Facility and Project Management are both aware of all activities being performed in the cluster on a daily basis. Required authorization documentation is verified at the POD meetings. For example, Integrated Work Control Program packages (if used) and Radiological Work Permits are verified at the meetings.

The project team maintains a rolling three-week schedule that is a subset of the detailed project baseline schedule. This rolling schedule is "statused" and updated weekly, at times designated by the Project Manager. In addition, new information that is received at regularly scheduled project team meetings is also used to update the rolling and detailed project schedules.

*Describe the use of the working and/or "floor-level" schedules to manage day-to-day work, and how it interfaces with the baseline schedule.*

### 13.3 SCHEDULE CONFIDENCE DETERMINATION

When detailed planning for the Hazards Reduction has been completed, the risks associated with Hazard Reduction will be assessed to determine a Target and Commitment Schedule-at-Completion (SAC). Once the risks have been assessed, the number of risk events with high probability of occurrence and high impact will be tabulated. Multipliers will be determined using the following table based on the number of high/high risk (H/H) elements identified in Section 5.2.

**SAC Schedule Duration Scaling Factors**

HITS (H/H)	BASE PROBABILITY ( $S_p$ )	BASE SAC MULTIPLIER ( $S^x$ ) for 90% CONFIDENCE SAC
10	30	1.891
9	35	1.746
8	40	1.640
7	45	1.548
6	50	1.457
5	55	1.384
4	60	1.317
3	65	1.252
2	70	1.195
1	75 (Target)	1.142
0	90 (Commitment)	1.000

Target and Commitment SAC will be calculated using the following formulas:

Commitment SAC (90% confidence) = Base SAC x  $S^x$

Target SAC (75% confidence) = Commitment SAC/1.142

**PROJECT CONTROLS, REPORTING, AND DOCUMENTATION**

This section of the PEP discusses the routine, ongoing project activities for the [Project title] Closure Project. It includes routinely-scheduled meetings, project control activities, and routinely-generated reporting. The project control activities include two general topics: (1) internal project methods for establishing earned-value basis and reporting process, and any internal project analysis; and (2) processing this information into the format required for roll-up into the Site systems.

*The emphasis of this section is intended to be on the project-specific processes to develop information on project status. The intent is **not** to recreate or paraphrase the current P&I process for rolling up actual costs or earned value information. General information is provided on the P&I process with specific procedures available on the P&I Intranet Home Page.*

**14.1 PROJECT MEETINGS (EXAMPLE)**

The following is a schedule of regular project meetings that are held to communicate project status, identify and mitigate obstacles and risks to successful project completion and to maintain open and effective lines of communication between all internal and external elements of the project team. Meeting minutes are logged and maintained in the project file.

<i>Safety</i>	<i>Monthly</i>
<i>Plan of the Day</i>	<i>Daily</i>
<i>All Hands</i>	<i>Monthly</i>
<i>Project Status Meeting with Client</i>	<i>Weekly</i>
<i>Project Team Meeting</i>	<i>Weekly</i>
<i>Project Report Review Meeting</i>	<i>Monthly</i>
<i>Earned Value Review Meeting</i>	<i>Monthly</i>

Monthly Project Review Meetings will provide status data consistent with the requirements in Section 14.4



## 14.2 SITE PROJECT CONTROL INTERFACE (EXAMPLE)

A set of P&I Standards and Work Instructions describe the project planning and control system at the Site level, and the methods used by P&I to evaluate, display, and roll-up the data generated by the project/WAD and the cost accrual system. They include the details on how the Site manages the project control data – tracks and reports progress, reports earned value, posts accruals, etc. The Standards define the functions and requirements and the Work Instructions provide detail on how to use the systems; both are available on the P&I Intranet Home Page.

The focus of the information roll-up at the project level is the Charge Number and the Activity. The Activity identifies the lowest-level cost input in the BEST system and establishes the schedule start date and duration in the PMB. Collectively for the project the activities establish the Budgeted Cost of Work Scheduled (BCWS), or the baseline cost curve that the project is evaluated against within the overall Rocky Flats Closure Project.

The project manager/WAD manager is required to report monthly on the earned value by activity, resulting in the project Budgeted Cost of Work Performed (BCWP). The actual costs are derived from the costs collected on a monthly basis by Charge Number, and applied against the Activity to determine the Actual Cost of Work Performed (ACWP). Because of these constraints, there may only be one Activity per Charge Number, although there may be more than one Charge Number per activity, depending on how the project wants to collect cost below the activity level.

*The above section provides a generic discussion of the interface between the project and the P&I CPB statusing process.*

## 14.3 PROJECT CONTROL

The management approach of this project provides for easily maintained schedule and cost controls which supplement the Site systems. The inputs to the process are the work plans for a logical grouping of activities (e.g. planning, decontamination, and dismantlement for a given work area or SET). These work plans have sub-activities and schedules which roll up to the Activities identified in the PMB. Additionally, the sub-activity costs are identified and collected in a table of values [or Cost Plan] which also roll up to the Activity.

### 14.3.1 STATUS MEASUREMENT

*This section should describe the specific processes used by the project to interface with the P&I statusing process. General information on this process is provided below:*

*The project team **SHALL** status the CPB schedule at the Activity level during the last week of the month. (Projects on the Site critical path, or projects linked to critical milestones **may** require more frequent status.) The project team performs a complete analysis of the project performance and plan at least once a month. Project status includes development and collection of status data, and ensuring that the schedule reflects the current operating logic, such as pertinent performance measures and milestones.*

*Activity performers input two pieces of information to define schedule status. They input this information on the working schedule, typically on a weekly basis (This topic needs to be discussed in this section). Cumulative earned value needs to be provided at the CPB level the last week of the month. P&I inputs the status data to the CPB-A Working schedule. Percent complete quantifies the amount of the work that is complete, as a fraction of the total work. Project managers derive percent complete values from objective measures of activity output (This topic needs to be discussed in this section). The analysis uses percent*

complete to calculate the BCWP. In addition, performers must input the remaining duration estimated for each task, which updates the future schedule.

Remaining activity duration may change the CPB-A schedule activity duration (Development of this duration needs to be discussed in this section). The schedule process adds the remaining duration to time now. The schedule then recalculates successor activities. This may extend the project critical path, or change the critical path if activities on previous non-critical paths are delayed. Alternatively, since many projects are given constrained end dates based on the 2006 schedule, activities may identify "negative float."

The financial system collects actual cost in accordance with the Work Breakdown Structure. In addition, project managers must ensure that costs incurred but not yet paid, such as subcontracts, are accrued. The enables effective collection and reporting of the ACWP.

### 14.3.2 ANALYSIS (EXAMPLE)

Monthly analysis of project performance determines the management actions necessary to meet the project scope, schedule and cost requirements, and to look for ways to accelerate the project. Triggers for project analysis include:

- Status showing critical path behind-schedule.
- Status changes the critical path.
- Statused schedule non-critical paths show very little, zero, or negative float.
- Statused schedule moves milestones (including Performance Measures) beyond target dates.
- Objective performance measures below plan (e.g., liters of liquid processed vs. time.)
- Negative project cost variance. (Note that BCWS does not include contingency or escalation.)
- Project EAC exceeds funding level (including contingency and escalation.)
- New scope information.
- New project interface information.
- New resource availability information.
- Project risk factor trigger.

This analysis leads to planned actions to eliminate variances. If appropriate (due to potential magnitude of impact or lack of clarity on the actual cause), the project team performs a root cause analysis to support response action decisions.

*This section discusses the triggers that the project will use to identify WBS elements which will require variance analysis. The intent would be to identify the candidate elements on a more frequent basis or for a lower-level activity than would be reported to the CPB level.*

### 14.3.3 PROJECT REPORTS

The reporting discussed in this section covers the routine reporting of project information for three purposes: (1) as required to support the roll up of project control information to the Site reporting through the WAD and PBD reporting, (2) as required for monthly project reviews, and (3) for internal project purposes.

#### Site-Level Reporting

*This section should describe the specific processes used by the project to interface with the P&I reporting process. General information on this process is provided below:*

*The reporting requirements to support the Site reporting cover several items. Providing the earned value data by Activity, as discussed under Status Measurement, is one element. Kaiser-Hill uses a consistent format to report monthly progress against the baseline plan. Project reports include schedule comparison, milestone, and earned value information necessary to control the projects. Standard reporting extrapolates project Estimate At Completion (EAC) based on the earned value to date. Variance reports describe the cause of*

technical, cost, or schedule variances above thresholds determined by the appropriate Kaiser-Hill PBD/WAD Manager. When necessary, the PBD/WAD Manager plans and executes actions to resolve variances. Standards S-05, 08, 09 and 13 and Work Instructions INST-006, 122, 123, and 127 describe the status reporting process and formats.

The cost reporting requires taking the costs given in the Site Labor and Material Supply Reports (given in the Peoplesoft system by WBS or Charge number), and the Accrual Reports by Charge Number and adjusting and/or correcting them to reflect invoices not yet received, incorrect charges, etc. Following review and approval by the Kaiser-Hill Project Manager, the Accrual Report is submitted to Kaiser-Hill Accounting. This Accrual Report provides current information for development of the project's actual cost to date, as well as, the obligated or incurred costs.

For WBS elements that show a variance at the "wadlet", WAD, or PBD level, the project must provide input into the Project Performance Report at the appropriate level. Additionally, safety performance information is published monthly. It includes trends of the key safety performance measures.

### Monthly Project Review (EXAMPLE)

Monthly project review meetings are required within D&D Projects. Prior to these meetings the Kaiser-Hill Project Manager provides a Project Performance Report (PPR). The monthly project review meeting presentation by the project will follow the following format:

#### SAFETY PERFORMANCE

The project reports on its Recordable Case Rate, Lost Workday Case Rate, Lost Workday Severity Rate, Authorization Basis Violations, Radiological Violations, Criticality Safety Infractions and Occurrences, and any other safety or radiological issues/concerns, and compare its safety performance, for the above mentioned safety indicators, to the K-H site targets.

#### PERFORMANCE MEASURES

The project presents the current status of its K-H regular and Super Stretch Performance Measures. This includes detailed information regarding current status, issues/concerns, trends, forecasted completion date, required corrective actions, etc.

#### CORRECTIVE ACTIONS

If applicable, this item covers both Closed and Open project specific Corrective Actions (CA):

- For *Closed* Corrective Actions, identify what project specific CA was closed; when and what completion documentation was submitted; and, to whom.
- For *Open* Corrective Actions, review the scope of the project specific CA, current status, due date, forecasted completion date, issues/concerns, and required completion documentation.  
(Note: At a minimum, Corrective Actions will be indicated when safety, cost, schedule, external milestone performance, and production thresholds are at risk or have been exceeded.)

#### PERFORMANCE INDICATORS

The project will report on the following project performance indicators:

- COST PERFORMANCE – Period, Year To Date (YTD), and projected year-end cost performance including Cost Variance (CV), Cost Performance Index (CPI), and Estimate at Completion.
- SCHEDULE PERFORMANCE – Period, YTD, and projected year-end schedule performance including Schedule Variance (SV) and Schedule Performance Index (SPI).
- MILESTONE PERFORMANCE – Period, YTD, and projected year-end milestone performance. This would include all RFFO, DNFSB, and RFCA milestones. Performance would be shown as a Milestone Performance Index (MPI) which is a comparison of external milestones accomplished to external milestones planned to be completed.
- PRODUCTION INDICES – The product of the project's scope of work is the accomplishment of "physical work", e.g. lineal feet of piping/duct removed, cubic feet of glove box packaged, cubic meters of building rubble shipped. The indices chosen for the Building 886 Closure Project are..... Period and YTD performance of this physical work is reported as a family of project-

specific, discrete, and measurable Production Indices. The graphical/tabular comparison of project specific units of work accomplished to project specific units of work planned is.....

- BASELINE SCHEDULE PERFORMANCE - Period and YTD actual performance to the project's activity level Baseline Critical Path Schedule including total float and other key schedule elements. A current "Time Now" or performance period line needs to be indicated and the Critical Path statused to the Time Now line. If the project is behind schedule or a risk of falling behind schedule, the Project Manager will present detailed plans or recommendations to mitigate this behind or potentially behind schedule condition.

#### 60 DAY AND 120 DAY LOOK AHEAD

This section of the review is a 60-day and 120 day look ahead of the project's schedule, cost, milestone performance, procurement actions, waste projections, Performance Measures, staffing plans, and any other project specific items of interest.

#### ISSUES AND CONCERNS

#### PROJECT STATUS ASSESSMENT

#### AGREEMENTS AND COMMITMENTS

*The above information is provided as an example and is excerpted from the format required for D&D Projects Monthly Reviews. The topics **SHALL not** be modified without D&D Programs approval. Items from Section 5, Project Risk Management, identified as H/H should also be statused (i.e. "Project Risk Factor Trigger"). Specifically, is the H/H rating still warranted, what is the status of prevention and contingency activities, and are any new risk items becoming significant, and are there any impacts on cost and schedule confidence/contingency.*

#### **Internal Project and RMRS Reporting**

*This section will contain the details of the reporting that the Kaiser-Hill and/or RMRS project management requires to provide internal controls. It also shows an example Project Document Matrix.*

The table below presents the list of Project documents and the approval, transmittal, and customer distribution requirements for the major project documents.

## Example Project Document Matrix.

Document	Frequency	Creator	Approval Authority	Distribution
Project Execution Plan	Revised yearly	Project Team (P&I support)	Project Manager Responsible 10-speed Director, P&I	Project Team Kaiser-Hill managers DOE-RFFO
WBS Dictionary	As needed	Project Team (P&I support)	P&I Manager SCCB or ICCB	Intranet
Project Schedule (Primavera)	Baseline-one time	Project Team (P&I support)	Project Manager Responsible 10-speed	Intranet
Project Cost Estimate [BEST]	Life cycle-one time, Annual work plan	Project Team (P&I support)	Project Manager Responsible 10-speed	Intranet CD-ROM
PBS	Annual	Project Team	Project Managers Responsible 10-speed	DOE Project, PBS, and WAD managers
BCPs	As needed	Project Team	P&I SCCB or ICCB	SCCB
Monthly Reports	Monthly	Project Team P&I (support)	Project Manager	Project Team DOE-RFFO Contractor managers
Project Deliverable Reports	As scheduled	As assigned	Project Manager	As appropriate
Performance Measure Completion Reports	As required	PBS/WAD Manager	Responsible 10-speed DOE-RFFO	K-H contracts K-H P&I DOE

All formal reports documented for facility disposition and construction projects include the following basic information: Official project title as it appears on the authorizing document; Project WBS identification number; Report date that report information is based on; and, the date the report was printed. Schedules will indicate all scheduled activities, forecasted completion of the scheduled activities, a "Time Now" line, and the Critical path activities. As applicable, all project Internal, Performance Measure, RFFO, and RFCA milestones that fall within the span of the schedule will also be clearly indicated on the schedule.

**14.4 CHANGE MANAGEMENT**

*This section should describe the specific processes used by the project to interface with the P&I change control process (if any). General information on this process is provided below:*

*Kaiser-Hill P&I Standard S-01 and Work Instruction INST-002 define the RFCP change control process. The process applies to changes to the baseline plan. All baseline changes require documented approval by either the ICCB or SCCB prior to implementation. All baseline change documents submitted to DOE/RFFO are processed and approved through the K-H Contractor Change Control Coordinator. As a control mechanism to define the Types of administrative processing and management approvals required for BCPs, Control Types are categorized as Type I, II, and Administrative.*

**15.1 ACRONYMS (EXAMPLE) [Add or delete as needed]**

ACWP	Actual Cost of Work Performed (Actuals)
BCP	Baseline Change Proposal
BCWP	Budgeted Cost of Work Performed (Earned Value)
BCWS	Budgeted Cost of Work Scheduled (Budget)
BFO	Basis for Operation
BIO	Basis for Interim Operation
CAB	Citizens Advisory Board
CDPHE	Colorado Department of Public Health and Environment

CPB	Closure Project Baseline
CPM	Critical Path Method (schedule)
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COOP	Conduct of Operations
CV	Cost Variance (BCWP-ACWP)
CWBS	Contract Work Breakdown Structure
DNFSB	Defense Nuclear Facilities Safety Board
DOE	Department of Energy
EAC	Estimate at Completion (Funds required to cover past and future , normally Fiscal Year, scope as represented in the BAC)
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EV	Earned Value (BCWP)
IHSS	Individual Hazardous Substance Site
ICCB	Internal Change Control Board (Kaiser-Hill Chaired)
ISMS	Integrated Safety Management System
IWCP	Integrated Work Control Program
PMB	Life-Cycle Baseline
LOE	Level of Effort
MOU	Memorandum of Understanding
ORR	Operational Readiness Review
P&I	Planning and Integration (Kaiser-Hill Organization)
PCS	Project Control System
PEP	Project Execution Plan
PMB	Performance Measurement Baseline (time phased budget which EV is claimed against)
PTS	Progress Tracking System
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Cleanup Agreement
RFCP	Rocky Flats Closure Project
RFETS	Rocky Flats Environmental Technology Site
RFLII	Rocky Flats Local Impacts Initiative (Public Group)
SOW	Statement of Work
STP	Site Treatment Plan
SV	Schedule Variance (BCWP-BCWS)
SCCB	Site Change Control Board (RFFO Chaired)
WBS	Work Breakdown Structure
WAD	Work Authorization Document (contractual agreement between RFFO & Kaiser-Hill)
WPD	Work Planning Document

## 15.2 REFERENCES

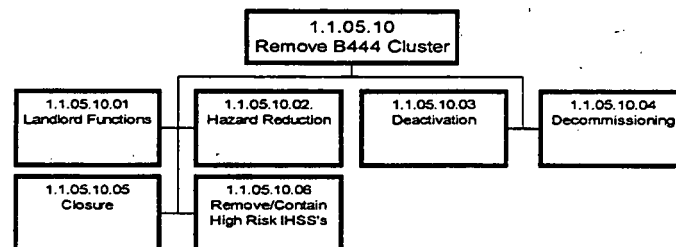
### APPENDICES

- Appendix A - Project WBS Dictionary
- Appendix B - Project Schedules
- Appendix C - Project Cost Estimate (BEST)
- Appendix D - Project Baseline Summaries (PBSs)
- Appendix E - Project Health and Safety Plan (HASP)
- Appendix F - Project Waste Management Plan (WMP)
- Appendix G - Project ARARs Listing
- Appendix H - Project Quality Assurance Project Plan (if required)

### PEP TEMPLATE, ATTACHMENT 1

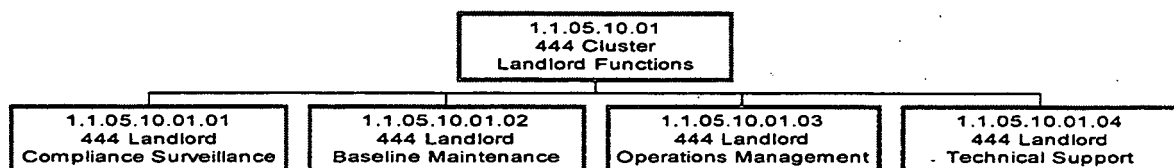
All work at the RFETS is organized in accordance with the integrated Site work breakdown structure (WBS). The WBS covers the entire project through project closure. The B444 Closure Project includes all work in the 1.1.05.10 leg of the Site WBS. The WBS structure depicted in this section is the Project Summary Work Breakdown Structure (PSWBS) and also indicates the level of each leg that will be reported to and tracked on the Site Integrated project baseline. Examples A-E graphically illustrate the organization of work within the project.

#### B444 CLUSTER REMOVAL SUMMARY WBS



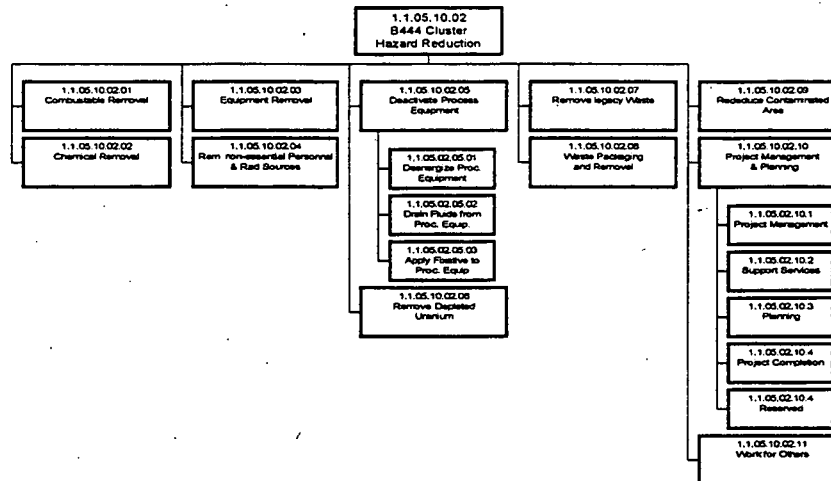
#### Example A – WBS Levels 4 and 5 for Removal of B444 Cluster

#### B 444 Cluster Landlord Functions W B S Levels 5 & 6



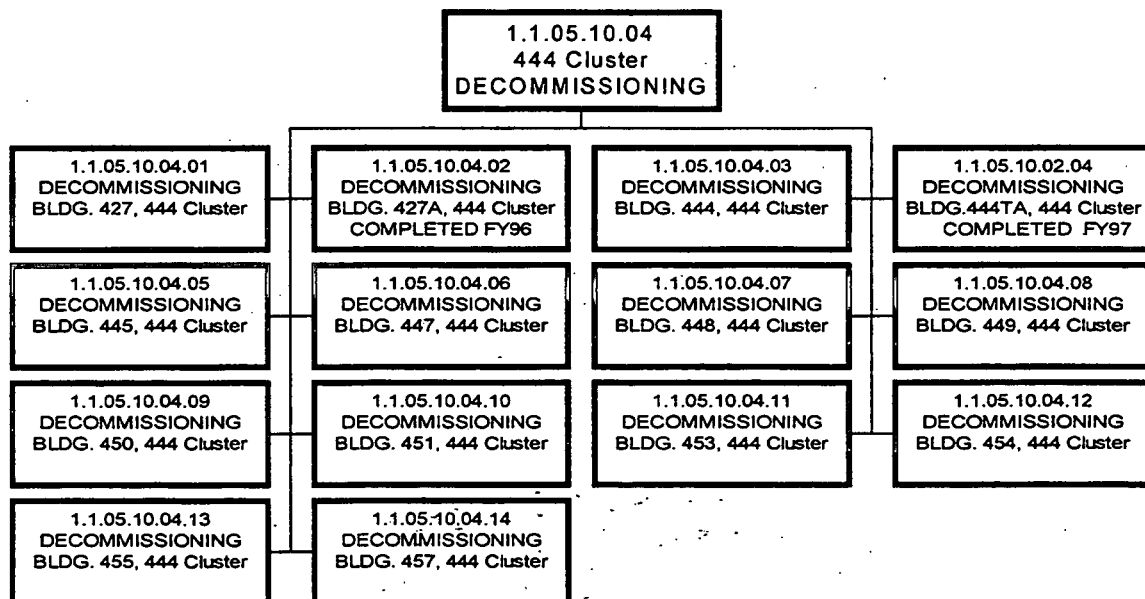
#### Example B – WBS Levels 5 and 6 for Removal of B444 Cluster.

## B444 CLUSTER REMOVAL SUMMARY WBS HAZARD REDUCTION LEVELS 5 & 6 of WBS



Example C – PSWBS for Hazards Reduction of B444 Cluster

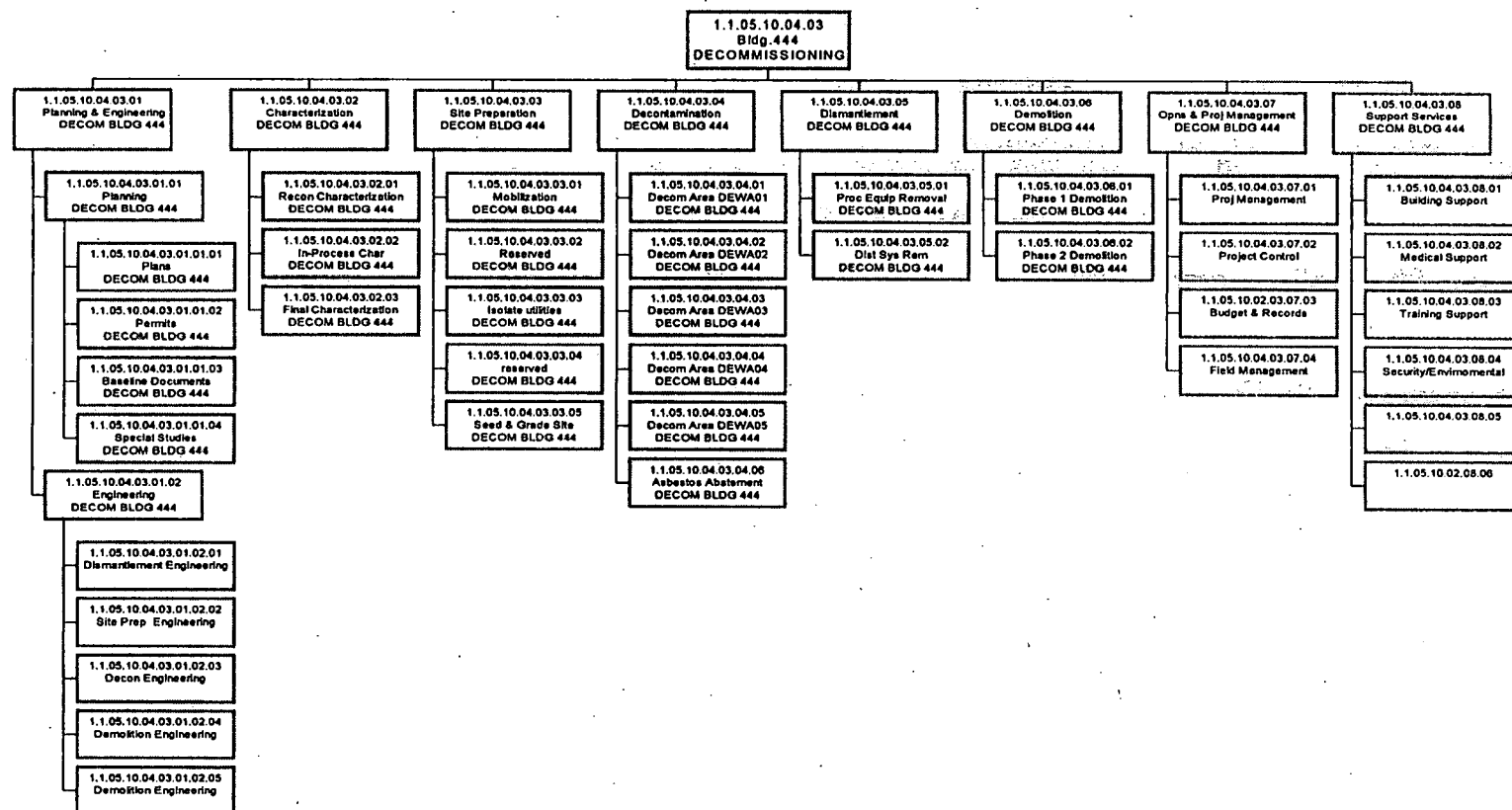
## 444 CLUSTER DECOMMISSIONING WBS LEVELS 5 & 6



Example D – Decommissioning Levels 5 and 6 B444 Cluster Removal



BUILDING 444 DECOMMISSIONING  
LEVELS 6, 7, 8 & 9, WBS 1.1.05.10.04.03



Example E – B444 Decommissioning PSWBS

## APPENDIX C-2 Waste Management Plan Guidance

Waste Management Plans (WMPs) are an integral tool to support project planning and compliant waste management. A WMP should be a part of all Project Execution Plans (PEP) or prepared as a separate document and is prepared for all projects (e.g. Environmental Restoration (ER), Facility Disposition (FD), Special Nuclear Material (SNM) projects, etc.). The purpose of a WMP is to provide necessary information regarding the different types and quantities of wastes that may be generated as the result of a project or activity. Additionally, WMPs should provide the following minimum information:

- Define applicable special sampling requirements,
- Define characterization or regulatory requirements,
- Define the waste as either deactivation (process) or decommissioning (remediation) waste,
- Provide management options, if known, and
- Outline governing waste acceptance criteria.

The Project Manager is responsible for reviewing the waste streams and identifying any onsite waste management options and interim requirements (e.g. stored, treated and/or disposed onsite).

WMPs should be developed as early in the process as possible and revised as the initial information used in its preparation changes or improves. At a minimum, the WMP must be consistent with information contained in the Reconnaissance Level Characterization Report (RLCR) and other reports and documents associated with the project or waste streams.

### 1.0 PURPOSE

The purpose of this guidance document is to provide a template outlining the necessary information required in a WMP, which will ensure consistency between the various project WMPs. The WMP should support:

- Demonstration of compliant approaches for the management of the wastes
- Identification of any regulatory or management concerns that need to be addressed prior to waste generation,
- Proper characterized waste projections
- Providing information and data to support baseline estimates included in the Closure Project Baseline (CPB)
- Facilitating integration of routine wastes, ER, and FD wastes into the waste management process
- Evaluating waste management options including waste minimization and recycling and reuse of the materials or waste

## 2.0 SCOPE

This guidance applies to the preparation of all new WMPs and to revisions of current ER and FD WMPs, as appropriate. It provides a format for specific information on waste disposition paths so that baseline dispositions or management requirements will be readily identified. In addition to providing a format for waste management, the WMP also provides a format for waste estimating, prescribing categories of waste types and contaminants, and defining specific high-level requirements affecting management of the waste. This guidance is not intended to prescribe waste handling procedures during generation and on-Site management of the wastes.

## 3.0 WASTE MANAGEMENT PLAN DEVELOPMENT PROCESS

The WMP should be initiated in the project scoping phase and updated as additional information becomes available. Updates should be considered after completion of the Reconnaissance Level Characterization Report, in conjunction with readiness assessments (i.e. completion of planning and design), prior to initiation of a new project phase (i.e. building deactivation, decommissioning, demolition), and when the CPB is revised. Additionally, if there is a significant change in the way that the project will do business, (i.e. direct shipment of waste, demolition of contaminated structures), the WMP should be updated to reflect these changes. Minor modifications/revisions to the WMP (as defined in RFCA) are not subject to the PEP internal review process and may be updated independently of the PEP; however, revisions will be submitted as Administrative or Project File updates. Issues of property disposition must be coordinated with the D&D Program Office, Waste Management, and Property Utilization and Disposal (PU&D).

## 4.0 REQUIREMENTS

The WMP should consist of a brief overview of the project and its organization and a detailed summary of the wastes that will be generated presented in the attached tables and applicable appendices. Table 1 should include the waste break out by type, Table 2 the waste generation rate estimate, and Table 3 information regarding the waste being generated to ensure compliant interim and ultimate management (e.g. final treatment and/or disposal). Table 3 should also identify unusual or potential regulatory requirements and exemptions that may need to be addressed to ensure proper management. Appendices to the WMP should include:

- The basis of estimate by waste categories,
- The economic analysis to evaluate the disposition path for personal property, and
- The economic analysis for the TRU waste determination on volume reduction and decontamination

#### 4.1 Estimated Volumes and Generation Schedule (Tables 1 and 2)

The first two tables include information necessary to support Site closure planning activities. This information should be contained in Tables 1 and 2 and is broken down by waste types and include the projected quantities for each category through FY05. The intent of the plan is to provide as much information as possible in the provided tables and any additional or support information should be included in appendices.

##### Table 1- Waste and Recycle Materials Estimate Categories

Table 1 summarizes the quantity of waste estimated to be generated over the lifecycle of the project. This estimate should contain estimated values identified in the major waste categories generated at the Site. The major waste categories include Transuranic (TRU), Low Level Waste (LLW), Low Level Mixed (LLM), Hazardous Waste, Sanitary Waste, recyclable materials, and other types. Under each of these major categories are sub-categories. Waste quantity estimates for each of the sub-categories should be provided. Where possible, the waste estimates should identify the estimated number and types of in-tack containers to be managed, or the estimated number of containers that may be required for each sub-category, and provide a total quantity for each of the major categories.

The establishment of sub-categories is an important element of waste management planning. The subcategories shall define unique groupings of item description code (IDCs) and waste stream and residues identification and characterization (WSRIC) codes or Site Treatment Plan (STP) groups based on various treatment and/or disposition pathways. Wastes with a common disposition pathway should be combined for description and estimate proposed when possible. Establishment of too many sub-categories (i.e. more than 30) will lead to redundancy, fragmentation and excessive cost in estimates with no added value. However, the WMP must identify waste types which are subject to special regulatory requirements (e.g. the STP), have no current disposition pathway, or require treatment by another Site or offsite organization prior to shipment or disposal. The estimate sub-categories should be identified in this section and then discussed in detail by sub-category. For example, materials that will be regulated under the STP shall be listed as sub-categories by STP group.

##### Table 2 - Waste Generation Rate Estimates

In addition to the estimated quantity of waste being generated, this section should also provide a waste generation schedule by FY quarter and project outyears (see Table 2). Once again, the estimated values should be identified by waste category (note: TRU is split out as TRU and TRUM; residues, if any, are included in TRU). The identification of waste generation by category and by SET (or project WBS element) as backup to Table 1 is recommended to allow the impacts of acceleration or delays of specific Sets on the overall waste generation projection is evaluated. (Note to the planners: Consideration must be given to weekends, holidays and AWS schedule).

Appendix 1 – Basis of Estimate

The waste estimate values should be supported by a basis of estimate, which provides details of the methodology, calculations and assumptions used to arrive at the estimated values. An estimated error range for each waste stream should also be provided. Initial waste estimate values may be based all or in part on parametric analysis. As detailed planning proceeds, the estimates should place greater reliance on walkdowns and planning documents, and finally work packages. Final volumes (see Table 1 for units) must be based on the containerized volumes or weight (e.g. the number of containers multiplied by the volume/container). The basis of estimate must consider the impacts of the ER and D&D operations, such as size/volume reduction, decontamination, secondary waste generation, container distribution, etc. and the assumptions noted. Actual data derived from previous projects should be used as practical, with the derivation process shown.

Appendix 2 – Economic Disposition Plan (EDP)

The EDP should be developed consistent with the Property Management Manual, 1-MAN-009-PMM.

Appendix 3 – TRU Waste Analysis

The TRU Waste Analysis should be developed if the project expects to generate significant TRU waste as required by the Disposition Decision Logic and Requirements for Decommissioning-Generated Transuranic Waste. This is identified in a letter, A. M. Parker to Distribution, "Final Policy for Transuranic Waste Minimization Documentation for Closure Program Integration Decommissioning Project," AMP-174-98, October 1, 1998.

Table 1 - Waste Breakout

Category	Sub-Category	Units	Container <sup>4</sup> (# & TYPE)	As-shipped Volume/Wt
TRU	TRU	M <sup>3</sup>		
	TRUM	M <sup>3</sup>		
	Residue	M <sup>3</sup>		
	TRU-Liquid <sup>3</sup>	M <sup>3</sup>		
Low-Level	Low-Level (inc. non-friable asbestos)	M <sup>3</sup>		
	LL-Friable Asbestos	M <sup>3</sup>		
	LL-Structural Debris	M <sup>3</sup>		
	Surface Contaminated Objects	M <sup>3</sup>		
	Contaminated Recycle Metal <sup>2</sup>	M <sup>3</sup>		
	LL-TSCA(PCB)	M <sup>3</sup>		
	LLW-Liquid <sup>3</sup>	M <sup>3</sup>		
Low-Level Mixed	LLM-RCRA- ( <i>Expand to include STP groups</i> )	M <sup>3</sup>		
	LLM-Liquid <sup>3</sup>	M <sup>3</sup>		
Non-Rad/ Regulated				
(Hazardous/ CERCLA)	RCRA	M <sup>3</sup>		
	CERCLA	M <sup>3</sup>		
	TSCA(PCB)	M <sup>3</sup>		
	Friable Asbestos	M <sup>3</sup>		
	Hazardous-Liquid <sup>3</sup>	M <sup>3</sup>		
Sanitary	Routine Sanitary	Tons		
	Non-Routine Sanitary	Tons		
	Rubble/Struct. Construction Debris (non-routine)	Tons		
	Non-friable asbestos/Spec. Sanitary	Tons		
Other	Salvage/PU&D (pieces/volume) <sup>1</sup>	M <sup>2</sup>		
	Rubble/Struct. Construction Debris (non-routine)	Tons		
	Radioactive test/calibration sources	Pieces		
	Non-contaminated Scrap Metal/Other Recycled Materials	Tons		

**Note:** Each WMP may substitute sub-categories with the approval of D&D Projects

<sup>1</sup> Salvage/PU&D given in short tons, pieces (as required by PU&D), and volume equivalent if determined later to be more cost effectively disposed of as LLW.

<sup>2</sup> LLM and Hazardous metals also may be recycle of via metal melt or other recycle vendors; however, since these quantities should be relatively small, all radioactive/hazardous recycled materials should be rolled up through this LLW sub-category. The purpose of this roll-up is to ensure that LLW, which can be economically recycled counts against LLW metrics, or if recycled options are not realized, the materials are still accounted for. This material should not be double counted under the other recycled materials sub-category.

<sup>3</sup> Liquids wastes generated must be treated/stabilized/solidified prior to disposal. Normal units will be as-treated waste container volume ready for disposal. Bulk liquids (e.g. decontamination solutions to 374) should be provided as separate value (in liters).

<sup>4</sup> Table rows should be expanded to include each container type; i.e. a row for drums, SWBs, and 10-drum overpacks for TRU.

Table 2- Waste Generation Rate Estimate

Project Waste Generation	FY 00 1 <sup>st</sup> Q	FY 00 2 <sup>nd</sup> Q	FY 00 3 <sup>rd</sup> Q	FY 00 4 <sup>th</sup> Q	FY01	FY02	FY03	FY04	FY05
TRU (M <sup>3</sup> )									
TRUM (M <sup>3</sup> )									
LLW (M <sup>3</sup> )									
LLM (M <sup>3</sup> )									
Hazardous (M <sup>3</sup> )									
Sanitary (Tons)									
Other									

Notes:

1. Estimates should be given in quarters for the current fiscal year (FY) and the next FY (FY+1). Generation for future years (FY+2 and on) should be given on a yearly basis.
2. Waste generation rate estimates should be coordinated with activities in the project schedule for a mature project.
3. All generation values given in cubic meters except for sanitary waste in short tons.

#### 4.2 Waste Characterization and Management (Table 3)

Table 3 outlines the information related to regulatory compliance and waste management requirements and provides a description of the type and level of detail. Table 3 should include a description of the waste, waste type (i.e. liquid, solid, gas, etc.), its origin or the process generating the waste, any additional pertinent information regarding the waste, and IDCs should be included, if appropriate. If the waste is TSCA regulated or hazardous waste and any associated RCRA Waste Codes and Underlying Hazardous Constituents (UHCs); and any regulatory requirements or considerations as applicable, this information should also be included. Measures taken and conclusions made regarding waste minimization, recycle or reuse must be addressed.

The following subsections identify the information and requirements that should be included in the Table 3. Table 3 should be used when providing information about a particular waste stream. When preparing the WMP, most of the information should be provided in tabular form.

##### Waste Stream Description (Column 1)

This column should include a narrative description of the various waste streams being generated by the project. The description should include:

- A physical description of the waste streams (liquids, solids, gases, etc.), IDCs or Waste Form Codes (WFC) if appropriate
- A description of the origin of the various wastes or the processes generating the waste
- A list of any known or suspected contaminants (i.e. organics, metals, PCBs, U, Pu, Am, etc.)
- Any other information or process knowledge which may ultimately assist in the final characterization or disposition of the wastes.

##### Rad or Non-rad (Column 2)

The waste stream should be identified as to its radioactive contamination. Specifically, the waste should be identified as low level, low level mixed, TRU, TRU mixed, non-rad TSCA/RCRA, or non-rad/non-TSCA/RCRA. (Note: radioactive calibration sources should be noted)

##### Process or remediation wastes (Column 3)

The process generating the waste should be identified. If the waste is CERCLA regulated, it should be noted in this column. The waste should then be characterized as either process or remediation waste.

##### RCRA Waste Codes (Column 4)

Any applicable RCRA Hazardous Waste Codes should be identified in this column. In addition, any underlying hazardous constituents (UHC) should also be identified. If the waste is regulated by TSCA regulations, a notation should be made as to such.



Regulatory Exemptions (Column 5)

If the waste is subject to any regulatory exemptions, it should be noted in Column 5. Examples of regulatory exemptions include (but are not limited to):

- Scrap metal
- Paint covered items (Pb, Cr). See Environmental Compliance Manager for guidance
- PCB Paints/PCB Bulk Product Wastes
- Recyclable materials
- Used Oil
- Others as appropriate

Nonroutine packaging, transportation or management requirements (Column 7)

Different types of wastes require different packaging and management requirements. The following areas should be addressed for each of the expected waste streams:

- Is the waste CERCLA, RCRA, TSCA or a combination? If so, outline specific requirements for on-site management of the waste (e.g. must be placed into a RCRA permitted storage area)
- Has unique inspection requirements while stored onsite (i.e. must be inspected every 30 days if a TSCA waste)
- Does the waste require any special packaging requirements (i.e. must be placed into a drum with sawdust, must be placed in 55E drums, etc.)
- If a CERCLA waste, identify the ARARs that must be complied with while managed on-Site. (Note: The ARARs in this section must conform to those in the ARAR section of the Decision Document and PEP)
- If the material is recyclable, identify onsite interim staging and storage requirements

Designated K-H approved off-site waste management facility or options (Column 8)

Information in this Section should include a summary of proposed or potential waste management options and specific facilities acceptable to perform the work. If RCRA regulated, Land Disposal Requirements (LDR) require specific treatment technologies and standards per waste type.

RFETS waste may only be sent to K-H approved facilities. A list of approved waste management facilities can be found on the Environmental Homepage on the Site Intranet (<http://rfetshp/environmental/Fuds/default.asp>). Sometimes, wastes may be generated with no final management options or K-H approved facilities available (e.g. TSCA mixed wastes). Such circumstances must be highlighted and a discussion of interim measures should address both onsite and offsite management options and requirements.

The preferred off-site waste management option or facility must be identified and the Project Manager is responsible for ensuring that a proposed facility is K-H approved under the Off-Site Waste Management Program. Note: Use of Brokers is prohibited without prior approval from K-H.

Waste Acceptance Criteria (WAC) required by the receiving facility (Column 9)

Many of the off-site waste management facilities have waste acceptance criteria that outline specific requirements that must be met to ensure compliance with their various permits and licenses. The WACs should be reviewed and any unusual conditions or potential problems or issues should be identified.

*Table 3 Characterization and Management*

Column 1	2	3	4	5	7	8	8a	9
Waste Stream Description	Rad/ Non-Rad	Process/ Remediation Waste	RCRA/TSCA regulated? If yes, list EPA waste codes. ID UHCs applicable	Regulatory Exemptions	Packaging & on-Site mgt Rqmts	Designated Onsite Treatment or offsite waste Management Facility	Secondary/ Tertiary Waste streams	Special WAC requirements

**5.0 POLLUTION PREVENTION/WASTE MINIMIZATION REVIEW**

The WMP must also include an analysis of all potentially reusable or recyclable materials to ensure these materials can be reused, e.g. chemicals, are properly designated and those that are economically feasible to recycle are diverted from disposal streams. This analysis must be based on availability of appropriate recycle technologies, availability of capable facilities, and cost effectiveness. Based on this analysis, all materials that are determined to be appropriate to recycle will be identified as such in the sub-category field in Table 1.

K-H Environmental Stewardship and Systems (ESS) personnel should be contacted for reuse and recycle options. Materials that are typically considered to be appropriate for recycle include:

<u>Waste Stream</u>	<u>Recycle Option</u>	<u>Status</u>
"Clean" scrap metal (not radioactively contaminated and not considered hazardous in accordance with RCRA)	Recycled through K-H approved scrap metal vendors or via contract.	Technologies and facilities are currently available. Note: Title must change prior to waste leaving RFETS
Radioactively contaminated scrap metal	Recycled by means of metal melt or other recycle vendor.	Technologies and facilities are currently available. Note: Material must not exceed contamination types and levels identified in the individual facility's waste acceptance criteria.
Mixed scrap material (radioactively contaminated scrap metal mixed with hazardous constituents.	None	K-H is attempting to locate and approve facilities that can manage these types of materials.
Clean sanitary building rubble/ debris	*Proposed reuse as backfill. Not regulatory or Stakeholder approved method.	Must meet criteria established in RFCA Standard Operating Procedure
Clean wiring and other electrical components	Recycled through K-H approved commercial facilities	Technologies and facilities are currently available.
Precious Metals	Recycled through DOS/ K-H approved commercial facilities	Facilities have been approved and are currently available.
Clean bulk plastics and glass	Recycled through K-H approved commercial facilities	Recycled through K-H approved commercial facilities

APPENDIX C-3  
Daily Construction Report

Construction Status Report			
Weather	AM	PM	Job Title: _____
Sunny			Contract/Task #: _____
Cloudy			Authorization #: _____
Rain			Type of Funding: _____
Snow			Work Order (IWCP) #: _____
Wind			Type of Subcontract: _____
<40°F			Scheduled Start: _____
40° - 60°F			% Scheduled to be Completed: _____
60° - 80°F			Schedule Completion: _____
>80°F			% Actually Completed: _____
			Revised Completion: _____
			Nonconformances: _____
			Job Description: _____
Workforce	NO.	LT*	Buildings/Areas: _____
Super			Progress: _____
Foreman			
Carpenter			
Carpet Layer			
Cement Finisher			
Dry Wall			
Electrician			Planned Activities: _____
Glazer			
Instrument			
Insulator			
Iron Worker			
Laborer			Support Requirements: _____
Mason			
Millwright			
Oper. Engineer			
Painter			Problems/Resolutions _____
Pipefitter			
Roofer			
Sheet Metal			
Teamster			
Tile Setter			
			Cost Information: _____
			Subcontract Value\$: _____
			Total billed \$: _____ as of: _____
			Changes to Subcontract: _____
			Total Cost of Changes \$: _____
			Total Number of Changes: _____
			Submittals Outstanding: _____
Total			
Equipment			
			Safety Evaluation: Daily: _____ Weekly: _____ Monthly: _____
			Project Team: _____
			Project Manager: _____
			Field Engineer: _____
			Const. Superintendent: _____
			Project Engineer: _____
			Construction Manager: _____
			Updated by: _____
			Date: _____
			Signature: _____
			Date: _____
*LOST TIME HOURS			
**Use the reverse side of this form for additional comments**			

APPENDIX C-4  
Monthly Personnel Resource Usage Report

FIXED PRICE CONTRACTOR/MONTHLY PERSONNEL RESOURCE USAGE REPORT																																
Month _____										Field Engineer/Supervisor _____																						
Project _____										Contractor _____																						
Auth. # _____																																
Craft	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Asbestos Workers																																0
Bollermakers																																0
Bricklayers																																0
Carpenters																																0
Carpet/Linoleum																																0
Electricians																																0
Elevator Constructors																																0
Glaziers																																0
Iron Workers																																0
Laborers																																0
Millwrights																																0
Operating Engineers																																0
Painters/Drywallers																																0
Pipefitters																																0
Plasterers																																0
Plumbers																																0
Roofers																																0
Sheetmetal Workers																																0
Sprinkler Fitters																																0
Teamsters																																0
Tile & Terrazzo Workers																																0
																																0
																																0
																																0

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**APPENDIX C-5**  
**Construction Progress Photographs**

**PHOTO**

**FILM ROLL NUMBER 49870** (Film roll number is shown on back of photo)  
**DESCRIPTION - ROCKY FLATS FIELD OFFICE** (Typed exactly as shown)  
**BUILDING T886D MODULAR LABORATORY UTILITIES** (Name of job)  
**SUBCONTRACTOR - ROY F. WESTON** (Name of Subcontractor)  
**K-H Project Manager - TJ Wirth** (Name of Kaiser-Hill Project Manger)  
**NCA20005** ( Job Number)  
**DATE 7/14/97** (Date photos taken)  
**#1 LOOKING NORTHWEST AT COMPLETED PIER FOUNDATIONS FOR MODULAR** (Negative number shown on back of photo and description of photo)

**APPENDIX D-1**  
**Statement of Work Template**

**Revision 1**

**STATEMENT OF WORK**  
**Construction Management**

**September 24, 1997**



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## Statement of Work

### Construction Management and D&D Project Management and Support

#### E-1.1 Introduction (Objective)

Construction/Project Management (CM/PM) serves as the programmatic umbrella organization to establish a mobilized, construction Subcontractor to perform construction and D&D work at the Rocky Flats Environmental Technology Site (RFETS). Construction and D&D work at RFETS is under the direct control and overview of Kaiser-Hill, LLC (Contractor). All construction and D&D activities performed will require Subcontractor to comply with the overall Plant Administrative Policies and disciplined Conduct of Operations.

The objective of this activity is to provide technical oversight and programmatic support for designated construction and D&D activities for the K-H team on projects at RFETS.

#### E-1.2 Scope

The work will consist of new construction as well as associated CM functions for deactivation and decommissioning (D&D) activities assigned, minor design, modification, alterations, and repairs to a wide range of existing facilities including, but not limited to, changes and additions to process systems, electrical, and machinery in existing facilities; stripping out of, and alterations to, existing buildings; modifications of laboratories; and other similar construction. Task orders normally are funded by expense and capital construction funds and related expense funded projects for upgrades.

The Subcontractor **may** perform work for specific task orders including, but not limited to:

A. Provide constructability review services.

Determine with Contractor overview by objective and quantitative means, the best suited construction options (i.e., self performed, subcontracted), or combination of operations, required to perform any given task contemplated by the Contractor.

Evaluate and report earned value statistics and provide other project related analyses.

Provide OSHA competent excavation inspections for control of all excavations on the Site.

Provide surveying and drafting support for K-H construction.

- Provide surveying support for engineering and construction work at the site.
- Supply drafting support for K-H.
- Provide maintenance of the Site Utilities drawings and benchmark system.
- Process excavation permit for construction activities.
- Provide construction management as assigned by task order.
- The Subcontractor **may** be tasked to provide support to collect data and produce deliverable reports and presentation packages to support construction project management activities.
- Subcontractor **SHALL** either perform all services in accordance with the K-H Quality Assurance Program or provide a QA Plan that meets the K-H QA Standards that is approved by K-H QA Group prior to initiating work activities.

- Subcontractor **SHALL** participate and comply with the K-H Price Anderson Amendment Act Program.
- Provide escort services as requested.

### E-1.3 General Background

CM/PM provides an integrated, coordinated, and cost-conscious safe approach to project construction and D&D activities at RFETS. CM/PM provides a consistent approach to construction and D&D oversight. Additionally, CM/PM provides a resource to facilitate the effective interaction between Contractor departments/requirements and Subcontractor organizations. Contractor **SHALL** utilize plant-approved designs and specifications.

### E-1.4 Technical Requirements

The Subcontractor **SHALL** perform designated support activities for the Contractor oversight for all construction and D&D PM activities on plantsite.

- Provide constructability review services during the design phase of the project to assist the design group in establishing the constructability of the proposed design, sequencing of work and procurement activities, and acceptance testing procedures.
- Determine with Contractor overview by objective and quantitative means the best suited construction options (i.e., self performed, subcontracted), or combination of operations, required to perform any given task contemplated by the Contractor.
- Provide plantwide control of all excavations and soil disturbances performed at RFETS and associated offsite projects by ensuring compliance with federal, state, and plant requirements.
- Monitor the effectiveness of safety and environmental compliance by construction personnel and subcontractors performing construction and D&D work at RFETS by tracking safety violations reported from construction personnel, Occupational Safety, and DOE.
- Schedule preconstruction walkdowns with affected Rocky Flats departments and subcontractors.
- Determine at the work site, on a current basis, and record construction documents, drawings, samples, purchases, materials, equipment, maintenance and operating manuals and instructions, current OSHA Federal Regulations and plant safety and health practices manuals, and other construction-related documents, including revisions that are current.
- Maintain effective quality, environmental, safety, health, and emergency preparedness programs in accordance with applicable requirements.
- Assure designated workers within the Protected Area (PA) are cognizant of and follow the "As Low As Reasonably Achievable" (ALARA) guidelines and procedures. ALARA encompasses both numerical exposure guidelines and conceptual radiation protection practices.
- Schedule Radiation Control Technicians (RCTS) for all construction projects.
- Contractor **SHALL** either submit its own procedures for K-H QA approval prior to initiating work or **SHALL** perform all its work in which adherence with K-H QAP, QAIP and other applicable procedures, etc.
- The Subcontractor **SHALL** provide technical coordination between Contractor departments and onsite construction subcontractors to address questions and problems.
- Provide budget and work package recommendations and analyses to the Contractor for the annual costs associated with maintaining the construction/project management

organization administrative staff and specific costs associated with the onsite captive Subcontractor.

- Provide assistance to field personnel for the proper control, handling, and disposal of waste associated with construction projects through knowledge of Resource Conservation and Recovery Act (RCRA), Waste and Environmental Management Systems (WEMS), Toxic Substance Control Act (TSCA), Federal Facilities Compliance Agreement (FFCA), and Land Disposal Restriction (LDR) information.
- The Subcontractor **SHALL** maintain records for all Subcontractor construction personnel including:
  - Personnel records
  - Time Cards
  - Distribution of paychecks
  - Vacation scheduling
  - Merit changes
  - Personnel relocations
  - Job classifications

Maintain project files to track items such as Project Acceptance and Transfers (PA&Ts), Project Beneficial Occupancy Notices (PBONs), Construction Field Changes (CFCs), and Engineering Orders (EOs), and coordinate all security clearances.

Report daily on all tasks to ensure that affected departments are informed of status, progress, and delays.

Provide regularly updated project progress and status reports as defined by DOE Orders and Construction Project Management procedures.

#### E-1.5 Reports, Data, and Other Deliverables

All work products will be provided as specified by the CTR in written format, and in a quantity not to exceed five copies. Additionally, quarterly summaries of work products will be delivered in written format to the CTR. Unless otherwise specified, all quantities of work products will be produced at an evenly spaced rate, with completion of all work products by the end of the 4th quarter of FY97. The Subcontractor **SHALL**:

- Provide written constructability review results as required by project schedules.
- Provide written recommendations to the Contractor or the best suited construction and D&D options as required by the project schedule.
- Provide completed excavation permits and field observation reports.
- Provide written assessments of the effectiveness of safety by construction personnel and subcontractors performing construction work at RFETS.
- Schedule and document preconstruction and D&D walkdowns with affected Rocky Flats departments.
- Transmit documentation requests for RCTs on all construction projects.
- Develop financial, bases of estimates, budget and work packages and analyses to support the Contractor's annual costs.
- Provide written recommendations to field personnel for the proper control, handling, and disposal of waste associated with construction and D&D projects through knowledge of RCRA, WEMS, TSCA, FFCA, LDR information.
- For each project regular reports and documentation include at a minimum:
  - Project Summary (Monthly) - Required monthly at close of business of the third working day after Management Control System performance kits are issued, Project Management Reporting System

- Project Issue Reports (Monthly) - As required based on project status, Open issues reports must be updated monthly and submitted with the Project Summary Report until closure, Project Management Reporting System.
- Project Procurement Status (Biweekly) - Updates and additions are required biweekly on Thursday, Project Management Reporting System.
- Progress Tracking system Report (Monthly) - Required monthly for select FM funded projects, redline hardcopies. Exact dates vary and are published in advance with an agenda/schedule.
- Project Performance Report (Monthly) - Submitted with Project Summary Report, Project Management Reporting System.
- Construction Management Review Presentation (Quarterly) - January (1st Q), April (2nd Q), July (3rd Q), October (4th Q), Miscellaneous data sources, inputs and outputs. Exact dates vary and are published in advance with an agenda/schedule.
- Project Management Plan/Work Package (Yearly) - Required in September, subsequent updates required as necessary with baseline change proposals, includes update of BCP Log and any subsequent supporting plans and/or documentation as required by the particular project as determined by DOE Orders and Procedures. Exact dates vary and are published in advance with an agenda/schedule.
- Project Funding Documentation (Yearly)- Project Data Sheet, Activities Sheet, and Justification/Validation Review packages and supporting information must be prepared yearly for budget call submittal in April/~~May~~ time period. Exact dates vary and are published in advance with an agenda/schedule.

#### E-1.6 Mandatory Plant Rules and Regulations

Work under this subcontract will be in accordance with all federal, state and local laws. The COEM Volume 4 (to be superseded by TBD) specifications address the conduct of construction operations. All personnel will be familiarized with RFP processes.

#### E-1.7 Special Considerations

All work to be performed using facilities, equipment, support services, and material provided by the Contractor.

Subcontractor personnel *may* be required to have access to the Protected Area or Material Access Areas. Access to these areas requires an active DOE "Q" or "L" clearance. Therefore, all Subcontractor personnel working in these areas will be required to have an active DOE "Q" or "L" clearance. All persons receiving access authorizations will be required to comply with administrative procedures for badging.

- Classification of information affecting project documentation.
  - All information **SHALL** be subject to classification reviews by an Authorized Derivative Classifier (ADC) prior to reproduction and release. Only personnel authorized by RFETS security *may* review information for proper classification.

#### E-1.8 Project Reporting

The Subcontractor reporting **SHALL** include, but is not limited to, the following: All requisite project planning, scheduling, control, and reporting functions **SHALL** be provided by subcontractor as *may* be required by authorized Task Order(s). Project data **SHALL** support

earned value reporting against detailed measurable weekly milestones per the format required by Contractor. Subcontractor cost, schedule, scope reporting, and change control capability is required. Software required is provided.

#### E-1.9 Project Meetings

The following is a list of routine meetings which the Subcontractor *may* be expected to participate in during the performance of the subcontract. Specific dates, times, location, and number of meetings and any other meeting deemed necessary will be specifically identified by the Contractor.

- Plan of the Day
- A kick-off design/orientation meeting
- Bi-weekly project status meeting at RFETS
- Title I package plant-wide review meeting
- Title II package plant-side review meeting
- Preconstruction and D&D meeting
- Weekly construction review meetings
- Safety Meetings
- Pre-evolution Meetings
- Review of as-built drawings
- As-built drawings and field notes review
- As-built drawings for final release review

As-built CAD tapes review (within 30 days of final approval of as-built drawings)

**APPENDIX D-2**  
**Instructions For Construction Subcontractor Pool Application and Application**  
**For Pre-Qualification, Subcontractor Evaluation**

**ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE (RFETS)**  
**APPROVED CONSTRUCTION SUBCONTRACTOR POOL**  
**OVERVIEW**

**1.0 PURPOSE**

The RFETS Approved Construction Subcontractor Pool (Subcontractor Pool) is a listing of Subcontractors who have satisfied the minimum requirements in the areas of: financial responsibility, performance, and safety and health. The purpose of the Subcontractor Pool is to simplify, streamline, and expedite existing operations of the award process for subcontracts.

**2.0 APPLICATION**

Subcontractors may apply and be added to the Subcontractor Pool list in one of two ways:

- Prior to Bidding - By properly completing and fulfilling the requirements specified in *Attachment 1 - Approved Construction Subcontractor Pool Application* (application) prior to bidding for and being awarded a subcontract, or;
- During Bidding - By properly completing and fulfilling the requirements specified in *Attachment 1 - Approved Construction Subcontractor Pool Application* (application) during the process of bidding for a subcontract, but before award. All bidders that plan on subcontracting work shall be responsible for ensuring that all their lower tier Subcontractors submit *Attachment 1*.

In order to be "approved" and added to the Subcontractor Pool, Subcontractors are required to meet minimum criteria in the areas of financial responsibility, performance, and safety and health. With limited exception, a subcontract is not to be awarded to a non-approved Subcontractor(s) – refer to Section 8.0, Exceptions and Waivers.

Applications will be provided during the procurement process or if applying prior to a bid applications must be obtained from the Subcontract Pool Coordinator (SPC).

**3.0 ADMINISTRATION AND RESPONSIBILITIES**

**Subcontract Pool Coordinator (SPC)**

The SPC is responsible for:

- Overall administration of the Subcontractor Pool program.
- Remaining aware of the current minimum requirements for determination of responsibility.
- Coordinating review of Subcontractor applications with appropriate organizations.
- Maintaining and distributing (as appropriate) updated copies of the Subcontractor Pool list that indicates Subcontractors that have been approved to perform work and their related dates of expiration.

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- Ensuring that Subcontract Performance Evaluation Worksheets are completed and submitted by Contract Technical Representatives (CTRs).

### **K-H Safety and Health Departments**

K-H Safety and Health Department is responsible for:

- Conducting and documenting safety and health responsibility reviews.
- Submitting the results of safety and health responsibility reviews and associated paperwork to the SPC.

### **Contracting Offices**

Contracting Office is responsible for:

- Ensuring that non-approved contractors do not perform work, unless "waived" – refer to Section 8.0.
- Ensuring receipt and proper completion of Subcontractor applications.
- Conducting and documenting the financial responsibility reviews.
- Submitting the results of financial responsibility reviews and associated paperwork to the SPC.
- Coordinating the submittal of Subcontractor applications to the SPC for processing.
- Notifying Subcontractors of their approval status.

### **K-H Construction Departments**

K-H Construction Department is responsible for:

- Conducting and documenting the performance evaluation reviews.
- Submitting the results of the performance evaluation reviews and associated paperwork to the SPC.

**NOTE:** SPC will conduct performance responsibility reviews on all K-H tasks.

### **Contract Technical Representative (CTR)**

The CTR is responsible for:

- Conducting and documenting the Subcontractor Performance Evaluations at the completion of contracts or tasks.

### **Subcontractor**

The Subcontractor is responsible for:

- Ensuring that their application is properly completed and submitted.

## **4.0 PROCESS OVERVIEW**

The following is a brief overview of the Subcontractor approval process as it is conducted during the normal "request for proposal" process. Prior to bidding type applications must be processed directly through the SPC.

### **Subcontractor**

1. Submits application (*Attachment 1*) to the Contracting Office for review.



### Contracting Office

**NOTE:** *The Contracting Office shall not process incomplete applications and will notify the Subcontractor directly to obtain any missing or incomplete information.*

2. Receives the Subcontractor's application and reviews for completeness and financial responsibility.

**NOTE:** *The "financial responsibility review" must result in a minimum of two (2) points for a Subcontractor to be considered "approved". If the Subcontractor fails the financial portion of the review, the Subcontractor shall not be approved to perform work unless a waiver is granted.*

3. Completes *Attachment 2 - Pre-Award Financial Responsibility Worksheet*.
4. Submits the Subcontractor's application and completed *Attachment 2* to the SPC for processing.

### SPC

**NOTE:** *The SPC will not process incomplete Subcontractor applications. If the Subcontractor's application is incomplete, the SPC will notify the Contracting Office who will be required to obtain the necessary information before the application can be processed.*

5. Receives the Subcontractor's application and completed *Attachment 2* from the Contracting Office.
6. Conducts or coordinates a technical performance review by the K-H Construction Department, as required.
7. Coordinates a technical safety and health review of the Subcontractors application with the K-H Safety and Health Department.

### K-H Construction Department

8. Receives *Attachment 3 - Pre-Award Performance Responsibility Worksheet* from the SPC.

**NOTE:** *The SPC will perform the technical performance review for K-H contracts and tasks only. The appropriate K-H Team Construction Department shall perform technical performance reviews for all other contracts and tasks unless they should decide to utilize the SPC for this review.*

9. Conducts a review and determines if the Subcontractor meets the minimum performance approval requirements.

**NOTE:** *The "performance review" must result in a minimum of two (2) points or more for a Subcontractor to be considered "approved". If the Subcontractor fails the performance portion of the review, the Subcontractor shall not be approved to perform work, unless a waiver is granted.*

10. Documents the results of the review on *Attachment 3* and returns the "worksheet" to the SPC for further processing.

## K-H Safety and Health Department

11. Receives the Subcontractor's application from the SPC.

**NOTE:** The "safety and health responsibility review" must result in a minimum of four (4) points for a Subcontractor to be considered "approved". If the Subcontractor fails the safety and health portion of the review, the Subcontractor shall not be approved to perform work, unless a waiver is granted.

12. Conducts a "safety and health responsibility review" and determines if the Subcontractor meets the minimum safety and health approval requirements.
13. Documents the results of the review on *Attachment 4 - Safety and Health Responsibility Review* form and submits the "form" and Subcontractor's application to the SPC for further processing.

## SPC

14. Receives the required information from the K-H Construction and Safety and Health Departments.
15. Notifies the Contracting Office as to whether or not the Subcontractor can be added to the approved Subcontractor Pool List.
16. Maintains all original documentation and files.

## Contract Technical Representative (CTR)

17. After the completion of a contract or task, the CTR shall complete and submit *Attachment 5 - Subcontractor Performance Evaluation* to the SPC.

## 5.0 SUBCONTRACTOR POOL LIST

Subcontractors will be approved for a period of one calendar year, although they may be removed at any time from the Subcontractor Pool for cause - at the SPC's discretion, or if the Subcontractor fails to maintain current the requirements for determination of approval.

The SPC's determination of approval can take into account the Subcontractor's past record of performance for work conducted at RFETS.

At an appropriate time prior to the expiration of the Subcontractor's term of approval, the SPC will advise the Subcontractor in writing that his application requires updating. If the Subcontractor does not respond satisfactorily, the Subcontractor will be removed from the Subcontractor Pool List.

Removal from the Subcontractor Pool List may or may not be done by written notice.

## 6.0 BID LISTS

The SPC will provide the various K-H Safety and Health and Procurement departments with current copies of the Subcontractor Pool List.

When a Contract Technical representative (CTR) receives a requisition that is appropriate for bid by the Subcontractor Pool, the CTR will identify the appropriate areas of specialization and submit this information to the Subcontract Administrator (SA). The SA will send a request for proposal to pertinent members in the Subcontractor Pool.

Generally, all pertinent members of the Subcontractor Pool will be advised that a request for proposal will be available, though exceptions may be made if the SA deems it appropriate. A roster of all current Subcontractor Pool members will be included with the advertisement.

## 7.0 SMALL BUSINESS SET-ASIDE

Not all Subcontractors in the Subcontractor Pool will be those classified as "Small Business" under the rules of the U.S. Small Business Administration. Some may be large businesses, and some may be additionally designated "Small Disadvantaged Business" (SDB) or "Women-Owned Business."

Under the current procedures, all subcontracts with an estimated value of less than \$3 Million Dollars are set aside for small business. There is a goal, expressed as a percentage of total dollars contracted, for SDB's and Women-Owned Businesses.

The responsibility for determining which contracts will be set-aside for SDB's and Women-Owned Businesses is made by the Contracting Office with the advice of the CTR. Lower tier Subcontractors to a small business Subcontractor may be a large business.

## 8.0 EXCEPTIONS AND WAIVERS

With limited exception, all work performed at RFETS will be performed by approved Subcontractors listed in the Subcontractor Pool.

**NOTE:** *A Subcontractor working onsite, for a short duration (2 weeks or less), can obtain a one-time waiver without applying for approval to the Construction Subcontractor Pool. Generally, the only justification for a waiver is that the work to be performed can only be conducted by the proposed Subcontractor.*

A Subcontractor may only perform work if Attachment 6 – Request for Waiver From Subcontractor Approval Requirements form is completed and approved by the Contract Technical Representative (CTR), Subcontract Administrator (SA), and the Subcontract Pool Coordinator (SPC). Additionally, "acknowledgement signature" is required by the K-H Safety and Health department. Distribution of the signed waiver is to be made as stated on Attachment 6.

**ATTACHMENT 1**

**SITE APPROVED CONSTRUCTION SUBCONTRACTOR POOL APPLICATION**

- **Instructions (1 Page)**
- **Area of Specialization (1 Page)**
- **Representations and Certifications (1 Page)**
- **References (1 Page)**
- **Safety and Health Worksheet (1 Page)**

## SITE APPROVED CONSTRUCTION SUBCONTRACTOR POOL APPLICATION

### Instructions

With limited exception, all work performed at Rocky Flats Environmental Technology Site (RFETS) will be performed by approved Subcontractors listed in the Site Approved Construction Subcontractor Pool.

Prior to conducting work, certain Subcontractor compliance and completion requirements will require verification while other requirements must be certified by the Subcontractor. All forms are to be legible and completed in their entirety with non-applicable blocks noted with a "N/A".

Please complete the following forms attaching the requested information as stated:

- Area of Specialization Form

Required Attachments:      None

- Representations and Certifications Form

Required Attachments:      None

- References Form

Required Attachments:      None

- Safety and Health Worksheet Form

Required Attachments:

1. A signed letter from Workers Compensation provider (not your company) stating the company's three most current years Workers Compensation Experience Modification Rates (EMRs).
2. Copies (one each) of the last three years of your company's Bureau of Labor Statistics (BLS) Log and Summary of Occupational Injuries and Illnesses (OSHA No. 198). These logs are to be legible, complete, and signed and dated by a company representative.
3. Copies (one each) of transmittal letters describing the outcome and number of citations for each Occupational Safety and Health Administration/Colorado Department of Public Health and Environment (OSHA/CDPHE) inspection in the past three years. List any citations received, indicating the type of citation, fines levied by OSHA, and negotiated settlements or fines paid to OSHA.
4. One copy of your company's written safety and health policy and procedures manual.

**AREA OF SPECIALIZATION**

Company: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

1. Select one:      ☐ General Subcontractor  
                         ☐ Subcontractor Only

2. Identify the Subcontractor's areas of construction specialization from the list below:

- ☐ Miscellaneous General Construction
- ☐ Design/Build
- ☐ Paving
- ☐ Roofing
- ☐ Painting
- ☐ Special Protective Coatings
- ☐ Mechanical, Plumbing, Piping
- ☐ Fire Protection (Sprinkler)
- ☐ HVAC
- ☐ Electrical, Fire Alarm, Instrumentation
- ☐ Telecommunications
- ☐ Earthwork
- ☐ Environmental Restoration
- ☐ Asbestos Abatement
- ☐ Other \_\_\_\_\_

Prepared By: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

**REPRESENTATIONS AND CERTIFICATIONS**

I, \_\_\_\_\_, as \_\_\_\_\_, of \_\_\_\_\_  
Name of Person                      Title                      Name of Company  
(Bidder)

represent and certify:

1.    ☐ The Bidder is a large business concern, as defined by the Small Business Administration.  
      ☐ The Bidder is a small business concern, as defined by the Small Business Administration.  
      ☐ The Bidder is a small disadvantaged business concern, as defined by the Small Business Administration.  
      ☐ The Bidder is a woman owned business concern as defined by the Small Business Administration.

2. The Bidder has read and agrees to abide by all applicable OSHA regulations and Site Safety and Health procedures and requirements.
3. The Bidder has adequate financial resources to perform Contract work and can bond work valued up to \$ \_\_\_\_\_.
4. The Bidder has the necessary organization, experience, accounting, operations controls, and technical skills, or the ability to obtain them. This may include such elements as Production Control procedures, Property Control systems, and Quality Assurance measures of services to be performed.
5. The Bidder will be available to participate in a site tour with as little as three days notice. The Bidder will accept notice issued by U.S. mail, telephone, or telefax. The Bidder will attend the site tours for all projects on which Bidder submits a bid.
6. The Bidder will be able to provide a sealed bid for the work within seven calendar days of the site tour.
7. The Bidder will agree to participate in the wrap-up insurance plan.
8. The Bidder will be able to mobilize within fourteen calendar days of Notice of Award.
9. The Bidder has the necessary production, construction, and technical equipment and facilities, or the ability to obtain them.
10. The Bidder is otherwise approved and eligible to receive an award under applicable laws and regulations.
11. The Bidder will submit a Quality Assurance plan for approval for Design/Build contracts, if required.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 199\_\_\_\_\_.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name of Signor

\_\_\_\_\_  
Title

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
City and State

\_\_\_\_\_  
Phone Number

\_\_\_\_\_  
Facsimile Number

*Note: Reading material required by the representations and certifications is available at: Rocky Flats Reading Room Front Range Community College Library, 3645 West 112th Avenue, Westminster, Colorado 80030, (303) 469-4435, Hours: Monday-Thursday 8:00 a.m. - 4:30 p.m.*

## REFERENCES

### **Project #1**

Name of Project: \_\_\_\_\_

Dollar Value: \_\_\_\_\_

Location (City and State): \_\_\_\_\_

Brief Description: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Client Project Manager  
or Contracting Officer: \_\_\_\_\_

Phone Number: \_\_\_\_\_

**Project #2**

Name of Project: \_\_\_\_\_

Dollar Value: \_\_\_\_\_

Location (City and State): \_\_\_\_\_

Brief Description: \_\_\_\_\_

Client Project Manager  
or Contracting Officer: \_\_\_\_\_

Phone Number: \_\_\_\_\_

**Project #3**

Name of Project: \_\_\_\_\_

Dollar Value: \_\_\_\_\_

Location (City and State): \_\_\_\_\_

Brief Description: \_\_\_\_\_

Client Project Manager  
or Contracting Officer: \_\_\_\_\_

Phone Number: \_\_\_\_\_



### SAFETY AND HEALTH WORKSHEET

**NOTE:** An asterisk denotes that an attachment is required for this item. Please refer to instructions for further information.

Main Standard Industrial Classification (SIC) Number: \_\_\_\_\_

Average # of Employees (Last 3 Complete years):

\_\_\_\_\_  
Year:                      Year:                      Year:                      3 Year Average \_\_\_\_\_

Total # of Hours Worked (Last 3 years)

\_\_\_\_\_  
Year:                      Year:                      Year:                      =                      Total \_\_\_\_\_

Workers Compensation Experience Modification Rate (Last 3 Complete years)\*:

\_\_\_\_\_  
Year:                      Year:                      Year:                      3 Year Average \_\_\_\_\_

Statistics (BLS) Log and Summary of Occupational Injuries and Illnesses (OSHA No. 198) (Last 3 Complete Years)\*:

Year	# of Recordable Cases	Incidence Rate	# of Day Away from Work Cases	Incidence Rate

Has your company received any citations from the Occupational Safety and Health Administration (OSHA) or Colorado Department of Public Health and Environment (CDPHE) in the past three years\*?

Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, attach copies (one each) of any citations received, indicating the type of citation, fines levied, and negotiated settlements or fines paid.

I certify to the best of my knowledge that the above information is true and correct.

Printed Name \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

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## PRE-AWARD FINANCIAL RESPONSIBILITY WORKSHEET

**Applicant:**

\_\_\_\_\_

BONDING (Circle one and complete Bonding Capacity \$)	Yes	No
Does this company have adequate bonding capacity to accomplish the work to be performed?	1	-2
What is the company's bonding limit?	\$	

FINANCIAL RATING (Circle one)	Yes	No
Is the company's financial rating (i.e. I.E., D&B Rating, TRW, or Independent Rating) favorable?	1	-2

[illegible][illegible]

*The "financial responsibility review" must result in a minimum of two (2) points for a Subcontractor to be considered "approved". If the Subcontractor fails the financial portion of the review, the Subcontractor shall not be approved to perform work unless a waiver is granted.*

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## ATTACHMENT 3

## PRE-AWARD PERFORMANCE RESPONSIBILITY WORKSHEET

## PRE-AWARD PERFORMANCE RESPONSIBILITY WORKSHEET

Applicant:

--

DEBARRED OR INELIGIBLE LIST (Circle all that apply)	Yes	No
Is the company on the Site Subcontractor Debarred List?	-4	0
Is the company on the Site Subcontractor Ineligible List?	-4	0

OFF SITE CONTRACTS - REFERENCES CHECK (Circle One)	Yes	No
Did the company fail to submit references?	-4	0
Were all 3 of the company's references favorable?	2	0
Were 2 out of 3 of the company's references favorable?	1	0
Were 1 out of 3 of the company's references favorable?	0	0
Were all 3 of the company's references unfavorable?	-4	0

ON SITE CONTRACTS - PERFORMANCE EVALUATIONS (Circle one)	Yes	No
Was the average of all past performance evaluations 22.1 - 33.0?	2	0
Was the average of all past performance evaluations 11.1 - 22.0?	1	0
Was the average of all past performance evaluations .1 - 11.0?	0	0
Was the average of all past performance evaluations <.1?	-1	0
The company did not have any past performance evaluations?	1	0

TOTAL	
-------	--

REMARKS

**Note:**

The "performance responsibility review" must result in a minimum of two (2) points for a Subcontractor to be considered "approved". If the Subcontractor fails the financial portion of the review, the Subcontractor shall not be approved to perform work unless a waiver is granted.

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## ATTACHMENT 4

### SAFETY AND HEALTH RESPONSIBILITY REVIEW FORMS

Safety and Health Responsibility Review Transmittal Example (1 Page)

Safety and Health Responsibility Review Worksheet Example (1 Page)

**SAFETY AND HEALTH RESPONSIBILITY REVIEW TRANSMITTAL**

DATE:

TO: Subcontractor Pool Coordinator (SPC), Kaiser Hill Construction, Bldg. 130, X2537

FROM: Douglas T. Rosco, Kaiser-Hill Safety & Industrial Hygiene, Bldg. T452C, X6672

SUBJECT: Contractor Safety and Health Responsibility Review for Placement on the Kaiser Hill Company  
Approved Bidders List

APPLICANT:

Kaiser-Hill Safety & Industrial Hygiene (S&IH) has completed a safety and health responsibility review (attached) for the above listed applicant. If you have any questions, please contact me at Extension 6672, or Digital Pager 3002.

Question:

Based on the information submitted and our review, has the applicant provided evidence which meets requirements expected of applicants' approved to perform construction work at the Rocky Flats Environmental Technology Site (Site)?

Question:

Based on the information submitted and our review, should the applicant be approved to perform work at the Rocky Flats Environmental Technology Site (Site)?

**Remarks:**

Attachment: Safety and Health Responsibility Review Worksheet

## SAFETY &amp; HEALTH RESPONSIBILITY REVIEW WORKSHEET

Type of Review:

Applicant:

Note: All evaluations (New and Annual) are to take into account the company's last three (3) calendar years of data and information.

1. Evaluation of Workers Compensation Experience Modification Rate (EMR)	Criteria (as % of 1)	Points	Score
EMR =	<85%	3	
% of 1 =	85% - 108%	2	
	>108%	0	

2. Evaluation of OSHA 198 Injury/Illness Rates Compared to BLS National Average for SIC Code	Criteria	Points	Score
2A. OSHA 198 - Recordable Case Rate (Total of Column A on the OSHA 198 Log)			
# of Cases =	<75%	2	
# of Man-hours Worked =	75% - 100%	1	
SIC =	>100%	0	
BLS Rate =			
Rate =			
% of Rate =			
2B. OSHA 198 - Days Away From Work Case Rate (Total of Columns 3 and 10 on the OSHA 198 Log)			
# of Cases =	<75%	2	
# of Man-hours Worked =	75% - 100%	1	
SIC =	>100%	0	
BLS Rate =			
Rate =			
% of Rate =			

3. Evaluation of Company's Written Safety and Health Program	Points	Score
• Well Developed Program Containing All Elements Outlined By OSHA Safety and Health Assessment Worksheet	3	
• Satisfactory Program Containing the Majority Elements, But Not Indicating High Level of Development	2	
• Minimally Acceptable Program Containing Some of Required Elements, But Not Well Developed	1	
• Unacceptable Program, Does Not Indicate Required Level of Occupational Safety and Health Expertise	0	

4. Evaluation of Company's OSHA Citation History	Points	Score
• OSHA Inspections with Willful Citations Upheld Through Formal Hearing Procedures (Automatic Disqualification)	-10	

TOTAL	
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## ATTACHMENT 5

### SUBCONTRACTOR PERFORMANCE EVALUATION

Subcontractor Performance Evaluation Instructions (6 Pages)

Subcontractor Performance Evaluation Form (1 Page)

## SUBCONTRACTOR PERFORMANCE

SUBCONTRACTOR

①

SUBCONTRACTOR ADDRESS (STREET, CITY, STATE)

②

TELEPHONE NO.

PROJECT TITLE

③

PROJECT

④

SUBCONTRACT NO.

⑤

SCHEDULED START DATE

⑥

ACTUAL START DATE

⑦

ORIGINAL BID PRICE

⑧

FINAL COST

⑨

PROJECT MANAGER

⑩

DESCRIPTION OF PROJECT

⑪

CONSTRUCTION SUPERINTENDENT

⑫

FIELD ENGINEER

⑬

	OBJECTIVE			SUBJECTIVE		
	FRACTION	BASE POINTS	SCORE	FRACTION	BASE POINTS	SCORE
S &	0.20	⑭		0.05	⑮	
OSHA	0.50					
LWCR	0.30					
LWDR	0.20					
SUB TOTAL	1.00					
SUB SCORE	0.20 X S&H Sub Total					
SCHEDUL	0.20	⑯		0.05	⑰	
QUALIT	0.20	⑱		0.05	⑲	
COST	0.12	⑳		0.03	㉑	
	0.04	㉒		0.01	㉓	
TIME	0.50					
ACCEPT	0.50					
SUB TOTAL	1.00					
SUB SCORE	0.04 x Submittal Sub Total					
MGT				0.05	㉔	
SUB TOTAL			㉕			㉖
TOTAL(WPS)						㉗

PREPARED BY CTR

⑳

CONCURRENCE:

Name

Signature

Date

CONTRACTING OFFICER

㉙

FIELD ENGINEER

㉚

SAFETY REPRESENTATIVE

㉛

PROJECT MANAGER

㉜

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**Subcontractor Performance Evaluation Instruction**

1. Provide the full legal name of subcontractor.
2. Provide address and telephone number of subcontractor.
3. Provide official complete project title.
4. Provide project number.
5. Provide subcontract number.
6. Provide scheduled start date, per subcontract.
7. Provide actual start date from construction records.
8. Provide original bid price.
9. Provide final cost.
10. Provide Project Manager's name.
11. Provide a description of the project.
12. Provide Construction Superintendent's name.
13. Provide Field Engineer's name.
14. For the S&H Objective Performance Measure (20%), there are three component Safety and Health performance indicators which make up the quantitative portion of the S&HPI. These industry standard performance indicators compare the sub-contractor's safety performance to national average rates. Following is a description of the S&H component performance indicators and their weight values:
  - OSHA Reportable Rate (OSHA)  
National Average Rate (50%)
  - Lost Work Case Rate (OSHA)  
National Average Rate (30%)
  - Lost Work Day Rate (OSHA)  
National Average Rate (20%)

S&HPI scoring values and descriptive grades for each of the performance indicators are as follows:

- <0.85 = Excellent (3 base performance points)
- >0.85 - 0.95 = Good (2 base performance points)
- >0.95 - 1.05 = Fair (1 base performance point)
- >1.05 = Unsatisfactory (0 base performance points)

15. For the S&H Subjective Performance Measure (5%), the CTR will score the subcontractor taking into account special project requirements that may not be reflected in the quantitative score. Subcontractor performance are scored as follows:
  - Excellent = 3 base performance points
  - Good = 2 base performance points
  - Fair = 1 base performance point
  - Unsatisfactory = 0 base performance points
16. For the Schedule Objective Performance Measure (20%), the quantitative portion of the Schedule Performance Index (SPI) is calculated as follows:
 
$$\text{SPI} = \frac{\text{Actual work day duration from start to task substantially complete}}{\text{Baseline work day duration from start to planned date task substantially complete}}$$

Two factors to be considered in calculating the "Actual" workday duration are the actual workdays scheduled to complete the task and whether or not the task was started on the agreed upon start date. Workdays would be added to the completion duration on a one for one basis if the subcontractor arbitrarily chose to start the task later than the agreed upon start date. SPI scoring values and descriptive grades are as follows:

- <0.95 = Excellent (3 base performance points)
- ≥0.95 - 1.00 = Good (2 base performance points)
- >1.00 - 1.05 = Fair (1 base performance point)
- >1.05 = Unsatisfactory (0 base performance points)

17. For the Schedule Subjective Performance Indicator (5%), the CTR will score the subcontractor taking into account special project requirements that may not be reflected in the quantitative score. Subcontractor performance is scored as follows:

Excellent - 3 base performance points  
Good = 2 base performance points  
Fair = 1 base performance point  
Unsatisfactory = 0 base performance points

18. For the Quality Objective Performance Measure (20%), the quantitative portion of the QPI is determined from a comparison of the adjusted number of measurable or valid Non Conformance Reports (NCRs) at substantial completion of a task versus the "baseline" number of planned NCRs.

Since the cost/schedule impacts to a task may vary significantly, due to the resolution of an NCR, a graded multiplier ranging from 1 to 10 may be applied to the absolute number of valid NCRs to account for these impacts. A 1 multiplier could be used where the resolution impacts to cost/schedule are "minor" or "insignificant" whereas a 10 multiplier may be applied to the absolute number when the resolution impacts to cost/schedule are "major" and "significant". Through the use of this graded NCR multiplier, the evaluator can make discretionary adjustments to the QPI to account for the cost/schedule impact associated with the resolution of an NCR.

Using a graded approach, the Project Manager will coordinate with the CTR to establish a baseline number of NCRs to measure subcontractor quality performance. The objective QPI will be calculated as follows:

$$QPI = \frac{\text{Adjusted number of actual NCRs at task substantially complete}}{\text{Baseline number of NCRs planned at task substantially complete}}$$

QPI scoring values and descriptive grades for each of the performance indicators are as follows:

<0.90 = Excellent (3 base performance points)  
>0.90 - 1.15 = Good (2 base performance points)  
>1.15 - 1.30 = Fair (1 base performance point)  
>1.30 = Unsatisfactory (0 base performance points)

19. For the Quality Subjective Performance Indicators (5%), the CTR will score the subcontractor taking into account special project requirements that may not be reflected in the quantitative score. Subcontractor performance are scored as follows:

Excellent = 3 base performance points  
Good = 2 base performance points  
Fair = 1 base performance point  
Unsatisfactory = 0 base performance points

20. For the Budget Objective Performance Measure (12%), the quantitative portion of the Budget Performance Index (BPI) is calculated as follows:

$$BPI = \frac{\text{Actual cost obligated at task completion}}{\text{Bid Cost + approved changes (approved subcontract construction baseline value)}}$$

BPI scoring values and descriptive grades are as follows:

<0.95 = Excellent (3 base performance points)  
>0.95 - 1.00 = Good (2 base performance points)  
>1.00 - 1.05 = Fair (1 base performance point)  
>1.05 = Unsatisfactory (0 base performance points)

21. For the Budget Subjective Performance Indicator (3%), the BPI evaluation is based on a subjective evaluation of the subcontractor's ability to effectively and efficiently control, document, report, and manage project costs. Subcontractor performance are scored as follows:

Excellent = 3 base performance points  
Good = 2 base performance points  
Fair = 1 base performance point  
Unsatisfactory = 0 base performance points

22. For the Submittal Objective Performance Measure (4%), there are two component submittal performance indicators that make up the quantitative portion of the Submittal Index (SI). The two component Submittal performance indicators are related to the timeliness of the submittals and the first time acceptability of the submittals. Following is a description of the component performance indicators and their weighting values:
- Scheduled Submittal Index (50%) - The SSI is the number of submittals received on/or ahead of schedule divided by the total number of submittals due per the baseline.
  - Submittal Acceptance Index (50%) - The SAI is the number of submittals accepted the first time divided by the total number of submittals due to the baseline..

The scoring values for each of these component performance indicators and their descriptive grades are as follows:

1.00 = Excellent (3 base performance points)  
0.97- <1.00 = Good (2 base performance points)  
0.95- <0.97 = Fair (1 base performance point)  
<0.95 = Unsatisfactory (0 base performance points)

As indicated above, 50% of this performance indicator is concerned with the received submittal being acceptable to the customer the first time.

23. For the Submittal Subjective Performance Indicator (1%), the CTR will score the subcontractor taking into account special project requirements that may not be reflected in the quantitative score. Subcontractor performance are scored as follows:
- Excellent = 3 base performance points  
Good = 2 base performance points  
Fair = 1 base performance point  
Unsatisfactory = 0 base performance points
24. The Management Performance Index (5%) is 100% subjective. This indicator rates how effective, cooperative, responsive, and supportive the subcontractor management is to the customer. The MPI grading values and descriptive grades are as follows:
- Excellent = 3 base performance points  
Good = 2 base performance points  
Fair = 1 base performance point  
Unsatisfactory = 0 base performance points

25. Total all scores for Objective
26. Total all scores for Subjective
27. Total score equals the sum of Objective and Subjective scores *NOTE: any performance measure/indicator marked "NA" earns 1 base point.*
28. Provide signature of CTR.
29. Provide signature of Contracting Officer.
30. Provide signature of Field Engineer.
31. Provide signature of Safety Representative
32. Provide signature of project manager

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**SUBCONTRACTOR PERFORMANCE EVALUATION**

SUBCONTRACTOR

SUBCONTRACTOR ADDRESS (STREET, CITY, STATE)

TELEPHONE NO.

PROJECT TITLE		PROJECT NO.
CONTRACT NO.	SCHEDULED START DATE	ACTUAL START DATE
ORIGINAL BID PRICE	FINAL COST	PROJECT MANAGER
DESCRIPTION OF PROJECT		CONSTRUCTION SUPERINTENDENT
		FIELD ENGINEER

	OBJECTIVE			SUBJECTIVE		
	FRACTION	BASE POINTS	SCORE	FRACTION	BASE POINTS	SCORE
S &	0.20			0.05		
OSHA	0.50					
LWCR	0.30					
LWDR	0.20					
SUB TOTAL	1.00					
SUB SCORE	0.20 X S&H Sub Total					
SCHEDUL	0.20			0.05		
QUALIT	0.20			0.05		
COST	0.12			0.03		
	0.04			0.01		
TIME	0.50					
ACCEPT	-0.50					
SUB TOTAL	1.00					
SUB SCORE	0.04 x Submittal Sub Total					
MGT				0.05		
SUB TOTAL						
TOTAL(WPS)						

PREPARED BY CTR

Name

Signature

Date

CONCURRENCE:

CONTRACTING OFFICER

FIELD ENGINEER

SAFETY REPRESENTATIVE

PROJECT MANAGER

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**ATTACHMENT 6**  
**REQUEST FOR WAIVER FROM SUBCONTRACTOR APPROVAL REQUIREMENTS****REQUEST FOR WAIVER FROM SUBCONTRACTOR APPROVAL REQUIREMENTS**

NOTE: Type or print all entries, except where noted.

**REQUESTER INFORMATION**Name:  Department: Title/Company:  Extension: **SUBCONTRACTOR AND PROJECT INFORMATION**Company Name: Project & Location: Work to be Performed:  Start and End Dates **WHAT MINIMUM APPROVAL REQUIREMENTS DOES THE SUBCONTRACTOR NOT MEET?** (Check all that apply)☐ Financial ☐ Performance ☐ Safety and Health**JUSTIFICATION FOR WAIVER** (Be specific and explain why company can not be approved - attach additional sheet(s) as necessary.)


Requester (Print and Sign)  Date: **APPROVAL**

Approval shall be granted only by the K-H Prime Contractor Contract Technical Representative (CTR) and Subcontract Administrator (SA) assigned and responsible for the project. Approval of this waiver is contingent upon compliance with the following requirements.

1. All work shall be conducted in accordance with the Project Safety and Health Plan and Site safety & health requirements.
2. A project safety and health orientation shall be conducted prior to work.
3. A Job Hazard Analysis (JHA) shall be developed in accordance with MAN-071-IWCP, Integrated Work Control Manual.
4. A Job Task Briefing or "Pre-Evolution Briefing" (whichever is applicable) shall be held with all affected personnel prior to work.
5. A documented visual tool and equipment inspection shall be conducted prior to work - all must comply with applicable OSHA standards.
6. A designated Project Safety Professional/Designee and CTR (or their designee) shall continuously monitor all work activities.

Designated Project Safety Professional/Designee	<input type="text"/>
CTR or their designee	<input type="text"/>

Signature below indicates acceptance of responsibility for ensuring that the above requirements are met.

Contract Technical Representative (Print and Sign)	Date: <input type="text"/>
Subcontract Administrator (Print and Sign)	Date: <input type="text"/>
Subcontract Pool Coordinator (Print and Sign)	Date: <input type="text"/>

**ACKNOWLEDGEMENT**

K-H Health Department (Print and Sign)	Date: <input type="text"/>
--	----------------------------

Distribution: Original - CTR; Copy #1- Subcontract Administrator; Copy #2 - K-H Team Safety &amp; Health Dept.; Copy #3 - Subcontract Pool Coordinator

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## APPENDIX D-3 Decision Document Guidance

### DECISION DOCUMENT GUIDANCE

The DPP is the RFCA document that describes the steps for accomplishing the Vision of closing Rocky Flats, in terms of decommissioning buildings for their removal or reuse. It establishes the overall framework for decommissioning a building leading up to either its release for reuse or its demolition and disposal. It elaborates on the relevant portions of the building disposition process described in RFCA Attachment 9. For each building on Site, the DPP describes a process that starts with a scoping meeting, proceeds to a reconnaissance level survey for contamination and a hazard assessment, follows the report of these activities' findings with the removal of contamination or physical hazards identified and ends, for those buildings requiring decontamination, with a final characterization survey to document that the building is ready for reuse or dismantlement and demolition. Depending on the level of contamination, decontamination may be required for the buildings, or parts of the building. In some instances, decontamination may not be practicable and the building may be dismantled and demolished as low level or low level mixed waste. Consistent with Section 3.3.4, buildings determined after the reconnaissance level characterization to be free of contamination may go directly to reuse, dismantlement or demolition using applicable federal property disposition rules. The Site will also follow, as necessary, any other applicable legal requirement associated with the disposal of excess federal property, including the remediation of hazards associated with materials containing polychlorinated biphenyls (PCBs) and asbestos. Pursuant to RFCA § 119(k), the DPP is a site-wide decision document subject to the review and approval of both EPA and CDPHE.

Pursuant to RFCA Attachment 9, "Building Disposition," a DOP will be developed for any building found, as a result of reconnaissance level characterization, to have significant radioactive contamination or hazards. The DOP will present an activity-based program to decontaminate the locations identified in that building's reconnaissance characterization study as contaminated or presented a physical hazard. The DOP will include risk, economic and engineering assessments. Pursuant to RFCA § 118(l), DOPs for major nuclear facilities are decision documents subject to the review and approval of the LRA. Since all of the Site's major nuclear facilities are located in the Industrial Area, the practical outcome of this direction is that CDPHE, the LRA in the Industrial Area, will be the agency reviewing and approving DOPs. Also, since it appears likely that the decommissioning of each building needing a DOP will take at least six months to complete, the Site intends to develop and seek approvals for the DOPs through the RFCA IM/IRA process.

If DOE proposes to take actions that appear to require consultation with the LRA or require a RFCA decision document, the Site project point of contact will seek concurrence from the LRA before performing the actions. In seeking this concurrence, DOE will provide the LRA with data and a description of work which demonstrate that the work can be performed without a threat of release of a hazardous substance. DOE will discuss the relationship of the proposed activity to the overall CPB and the disposition plans for the buildings as they are known at the time. This demonstration may be made informally to the LRA project point of contact, with concurrence documented for the building administrative record. The Site and LRA point of contact will use the "RFCA Decision Document Requirement Method" (see next paragraph) to determine if the actions require preparation of a RFCA decision document. The parties to this DPP anticipate

that this and other questions regarding the necessity of decision documents for performing building disposition work will be resolved through ongoing consultation among the respective project points of contact.

The following method provides the screen the Site and LRA project points of contact will use in determining if a RFCA decision document is needed for a specific activity or related group of activities.

### RFCA Decision Document Decision Method

- I Purpose:
  - A. Provide a decision method (screen) to facilitate determining if an activity or related set of activities would be classified as requiring a RFCA decision document, that is, a DOP, PAM, IM/IRA or RFCA Standard Operating Protocol (RSOP).
- II The method facilitates:
  - A. implementing the consultative process;
  - B. project planning at an early stage (scope, schedule, budget);
  - C. determining if waste is "process" or remediation waste;
  - D. determining National Environmental Policy Act (NEPA) document requirements;
  - E. stakeholder involvement and schedule;
  - F. determining if consultation with the LRA or preparation of a RFCA decision document is needed.
- III The method is for use by:
  - A. the project points of contact;
  - B. oversight organizations internal and external to the Site.
- IV Method:
  - A. The Site project point of contact will determine the initial scope and schedule for the activity and related activities.
  - B. The Site project point of contact will do an initial screen to determine if activity is decommissioning using the following screen.

A RFCA decision document (such as a PAM, IM/IRA or DOP) is required, will be prepared, and regulatory approval received before an activity is undertaken that meets all of the following criteria:

1. is not considered "maintenance"<sup>2</sup> or process waste management<sup>3</sup>; and
2. does not support SNM removal for the purpose of deactivation or other pre-decommissioning actions; and
3. involves work that is likely to impact systems or equipment contaminated with radiological or other hazardous substances; and

<sup>2</sup> "Maintenance" includes activities that are necessary to continue a building's current mission, maintain a building's safety envelope, or modify a building for a change in mission (except a change of mission to decommissioning).

<sup>3</sup> "Process waste" means waste generated before "decommissioning" commences for the activity being analyzed.

4. relates to the building proper (that is, removal of fixed equipment and structural components) but exclude follow-on environmental remediation activities.

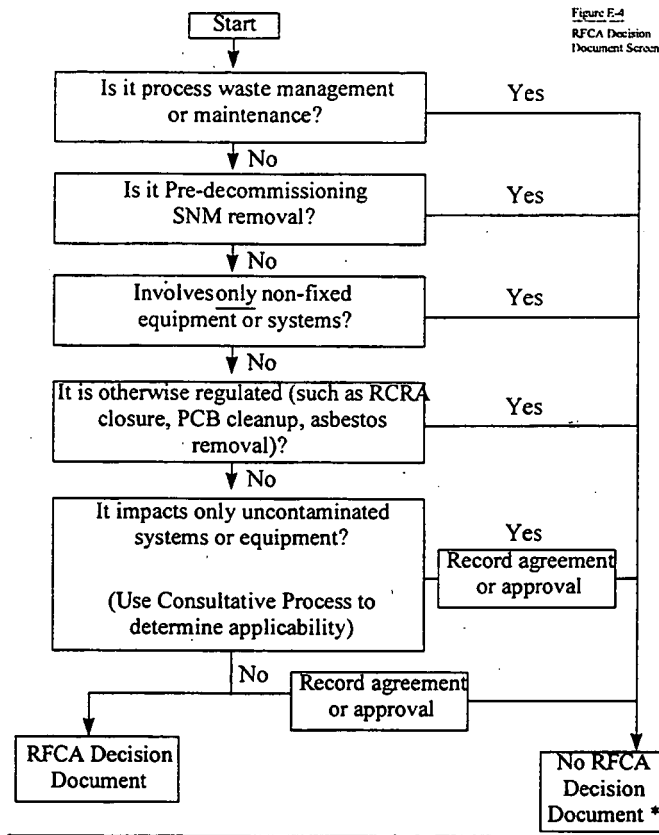
Activities that meet the above criteria, and that are otherwise regulated (for example, RCRA closure, asbestos and polychlorinated biphenyl removal, underground storage tank closures, etc.) may be regulated either under a RFCA decision document or under the other regulatory process.

Figure 1.1-1 provides a flowchart of the above criteria. DOE expects open communication and consultation between the project points of contact.

Some activities that do not meet all of these criteria may be included for information in some decision documents.

- C. If the initial screen shows the activity may require a RFCA decision or is in the "gray area" between what may or may not need a RFCA decision document, the Site project point of contact will arrange a consultative briefing of the regulators. The briefing will include a discussion of the scope and schedule for the project. The briefing should follow the format established in the DPP for DOP content to ensure the discussion is focused and the information typically needed by the LRA is presented in a reasonably consistent format. The graded approach should be used in determining the level of detail for the briefing.
- D. The LRA will review the results of the Site's screen to determine if it agrees with the Site determination.
- E. If the collaborative agreement is that the activity does not require a RFCA decision document, the Site project point of contact will:
  - document the agreement in the manner agreed to during the meeting with the LRA project point of contact; and
  - document the decision in the Administrative Record; and
  - monitor the project scope to ensure it remains within that agreed to; and
  - notify the LRA before the project goes out of scope if possible, in sufficient time to initiate consultation with the LRA on the issue. A changed or invalid assumption that changes the scope would be part of the consultation discussions.
- F. If the collaborative agreement is that the activity does require a RFCA decision document, the following actions will occur.
  1. The consultative process will follow the requirements in RFCA and the DPP to determine what type of decision document is needed. The LRA will identify as specifically as possible what, if any, additional information is needed for approval of the activity. This will include information needed by the Support Regulatory Agency.
  2. A schedule will be agreed to for:
    - the Site to provide the additional information;
    - the LRA to complete its review of the information;
    - the public comment period and review times;
    - any other schedule issues involving both the Site and the LRA; and,
    - the Site to provide any additional information.
  3. The Site will then draft the decision document and involve the regulators as the document is drafted.





\* Consultation will occur, as appropriate, under applicable statute(s), such as, RCRA, CHWA, TSCA, etc.

**APPENDIX D-4**  
**Proposed RFCA DECISION DOCUMENT Template**

**TEMPLATE CONTENTS**

Executive Summary

Section 1.0 Introduction (Purpose and Scope)

Section 2.0 Project (Building/Cluster) Description

Section 3.0 Alternatives Analysis and Selection

Section 4.0 Project Approach

Section 5.0 Health and Safety

Section 6.0 Waste Management

Section 7.0 Compliance with ARARs

Section 8.0 Environmental Consequences of the Action

Section 9.0 QA/QC

Section 10.0 Implementation Schedule

Section 11.0 Project Organization

Section 12.0 Comments and Comment Responsiveness Summary

Section 13.0 References

Appendices (If required)

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## **RFCA DECISION DOCUMENT PREPARATION GUIDANCE**

The DOP will be prepared and approved in accordance with the RFCA IM/IRA approval process. The DOP will contain sufficient information so the regulators can be satisfied that the project can proceed compliantly, with a high probability of success. Support buildings associated with a major project *may* be included in its DOP if they would be managed in the same project. A graded approach will be followed to determine the level of detail in the table of contents for PAMs. Using a graded approach, a DOP or IM/IRA at a minimum will contain the following information.

### **EXECUTIVE SUMMARY**

#### **1. INTRODUCTION**

- Include purpose of document and scope. Scope will include a description of the facility after decommissioning activities are completed, e.g., buildings to slab.
- Include brief justification explaining consistency with ISB, or if not, logic for doing, e.g., reduced risk, costs, etc. (Explanation for why it is important to do work and the relationship of the project to long-term remedial objectives).

#### **2. FACILITY (BUILDING/CLUSTER) DESCRIPTION**

- A physical description of building area; a brief operational history, including known releases and fires (based, where the information exists, on the historical release record); identification of RCRA units and CERCLA IHSS's; summary of the RLC Report findings.
- The DOP will describe the expected condition of the building at the beginning of decommissioning.

#### **3. ALTERNATIVES ANALYSIS & SELECTION**

Include an alternatives analysis and an impact analysis.

#### **4. PROJECT APPROACH**

- Description of project including: a description of project activities and work and emission controls; performance standards; any included RCRA closure activities; any separate environmental management or compliance approvals needed; and a description of the on-going plan for facility characterization.
  - Include: Identification of Hazards from the RLCR and how they will be addressed (Recommend use of tables summarizing data).
- Identification of activities to address hazards, including Work/Environmental/Spill(emphasize)/ Effluent controls.
  - Identify Decontamination approach.
  - Identify need for a Final Radiation Survey Plan and a Decontamination Plan.
  - Identify monitoring requirements.
  - Identify cleanup levels.
- Discuss Authorization Basis (reference documents that identify surveillance and equipment maintenance requirements) and Work Authorization

NOTE: Prior to proceeding with decommissioning, a management review of the project's infrastructure, procedures and personnel will be completed by DOE, the LRA and the IMC; such

review, to verify that the conditions exist to support the activities safely, *may* result in changes to the project as described in this document.

**5. HEALTH AND SAFETY**

- Include a description of the health and safety issues (worker and environmental)
- Include ISM discussion and how safety is built into approach.
- Address emergency response
- Summary of hazards from Project Approach above

**6. WASTE MANAGEMENT**

- Include a summary of the waste management issues, including those related to disposal.
- Identify waste quantities to be generated (TRU, LLW, and sanitary), where it will be staged, and ultimate disposition plans. Discuss unknowns and need for flexibility and possible change due to uncertainties with final destinations. (Waste Process Flow Chart recommended).
- Duration of storage or staging.

**7. COMPLIANCE W/ ARARS**

Includes list of applicable laws, orders, regulations, and CWA or CAA permit requirements; Chemical-, Action- and Location Specific and To-Be-Considered Requirements and Considerations; and RFCA building cleanup criteria and standards.

**8. ENVIRONMENTAL CONSEQUENCES OF THE ACTION**

- Include description of environmental, socioeconomic and cumulative impacts as a result of the project to: geology and soils, air quality, water quality, human health, plants and animals, historic resources, noise levels and the local economy; mitigation measures; unavoidable adverse effects; short-term uses in effect during decommissioning and long-term productivity after the actions are complete, and irreversible and irretrievable commitments of resources.
- Address NEPA and relative impact on human health, worker safety, and the environment.
- Address how the requirements have been met for compliance with the National Historic Preservation Act and the programmatic agreement with the Colorado State Historic Preservation Office.<sup>4</sup>

**9. QA/QC**

- Include a general description of the quality assurance and control issues.
- Include the training process to assure worker training is adequate, include a matrix of training requirements specific to the decommissioning project.

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<sup>4</sup> Sixty-four facilities of the former Rocky Flats Plant have been listed in the National Register of Historic Places as an historic district. A Programmatic Agreement with the Colorado State Historic Preservation Officer requires that the facilities be documented using the Historic American Engineering Record (HAER) format before the facilities are significantly altered or demolished. The documentation is scheduled for completion in March, 1998. The HAER documentation packages are submitted to the National Park Service for approval. Acceptance of the entire documentation package by the National Park Service is expected in the summer of 1998.

#### 10. IMPLEMENTATION SCHEDULE

- Include a schedule with level of detail addressing room by room (or set) logic and activities (**may** not need to be to the level identifying individual glovebox, tank or equipment item removal for equipment or sets whose remediation is not complex). This schedule will include anticipated document review times by the LRA.

*NOTE: This information will be supplied to add clarity to the decision document and to identify the general planned schedule if full funding is available. The schedule is not an enforceable part of the document, and DOE or its contractors **may** deviate from it without penalty and without having to notify or obtain the approval of the LRA in advance.*

#### 11. PROJECT ORGANIZATION

- Includes organization chart of project team, and a description of how project fits into larger facility disposition effort.

*NOTE: This information will be supplied to add clarity to the decision document and to identify reporting relationships and responsibilities. The organizational structure is not an enforceable part of the document and DOE or its contractors **may** deviate from the organization without penalty and without having to notify or obtain the approval of the LRA in advance.*

#### 12. COMMENTS AND COMMENT RESPONSIVENESS SUMMARY

#### 13. REFERENCES

- Include references to other documents used as information sources in the DOP, such as, RFCA, DPP, any RSOPs that would be used, RLC Report, project specific health and safety plan.

**APPENDIX E-1**  
**Core Training Requirements - D&D Worker**

1. Hazard Communications
2. 40-hour OSHA/8-hour Refresher
3. Radiological Worker II
4. General Employee Training - Initial and Refresher
5. RCRA Compliance
6. WSRIC
7. Waste Generator - All Areas + Waste Generator Qualification
8. Nuclear Criticality Safety

**ADDITIONAL CORE TRAINING REQUIREMENTS - SUPERVISOR**

1. 8-hour OSHA for Supervisors
2. Radiological Control for Supervisors
3. Nuclear Criticality Safety for Supervisors
4. Asbestos Awareness for Supervisors

**ADDITIONAL TRAINING AS NEEDED**

1. Fall Protection
2. Industrial Truck
3. Lockout/Tagout

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## APPENDIX F-1

## Partial and Complete Subcontract Close-out Form (Sheet 1 of 2)

WBS #: _____	Title/Description: <input type="checkbox"/> Expense, <input type="checkbox"/> Capital, <input type="checkbox"/> Demolition
B&R #: _____	
PRN #: _____	
Core Charge #: _____	
Note: If this is a demolition Project, provide a list of equipment, systems & structures removed or demolished, with their respective inventory numbers and values.	

## Section I: Partial SubContract Closure:

This section provides for the capitalization of equipment/property that has received a Beneficial Occupancy Notice which is closed-out. This **DOES NOT** close the Charge Number of SubContract. P.O. = Purchase Order

CHARGE #	P.O. #/ TASK #/LINE #	%	TOTAL \$ PER CHARGE	CHARGE #	P.O. #/ TASK #/LINE #	%	TOTAL \$ PER CHARGE

## Section II: SubContract And/Or Charge Number Closure:

This section provides for the total closure of subcontract(s) at the task level and the initiation of charge number closeout after all contracts have achieved 100% completion. P.O. = Purchase Order

CHARGE #	Other subcontracts Still Open? Y/N	P.O. #/ TASK #/LINE #	P.O. #/ TASK #/LINE #	P.O. #/ TASK #/LINE #

If Yes, closeout only the subcontract(s) as listed above. If NO, closeout the applicable subcontract(s) task # referenced above and initiate financial closeout of the charge number(s) as listed. These Charge Numbers will not have any labor hours charged against them after ton of the following:

☐ 90 days from the date this notice is submitted to procurement, or

☐ after \_\_\_\_\_ (date)

Attach a list of equipment, systems & structures with their respective inventory numbers, values and a copy of the Beneficial Occupancy Notice and/or Project Acceptance and Transfer.

**APPENDIX F-1**  
**Partial and Complete Subcontract Close-out Form (Sheet 2 of 2)**

**Comments:**

**SIGNOFFS:**

Name (Print)	Name (Sign)	Date
<b>End User:</b> <i>All deliverables have been received, the contract(s) is functionally completes, and is ready for financial and/or charge number closeout. (Required for Section I, II)</i>		
<b>Project Manager:</b> <i>Signoff stipulates that all deliverables have been received, the contract(s) is functionally complete, and is ready for financial and/or charge number closeout: (Required for Section I, II)</i>		
<b>Procurement:</b> <i>Procurement has been notified that the sub- contract(s) is functionally and technically complete, and has received the list of systems, structures, components, and deliverables associates with the project. (Required for Section II)</i>		
<b>Receiving/Property Management:</b> <i>The attached list of equipment, systems, structures &amp; components with a value over \$25, 000 of three years or more has been received, tagged, entered into the MARS G database as received, and PEMS database and has been withdrawn from Warehouse/storage. (Required for Section I, II)</i>		

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## APPENDIX F-2

# PROJECT BENEFICIAL OCCUPANCY NOTICE

[illegible]

**THE ABOVE PROJECT IS BEING COMPLETED THROUGH INTEGRATE WORK CONTROL PACKAGE (IWCP) NUMBER(S):**

214/

09/24/99

## APPENDIX F-3 - PROJECT ACCEPTANCE AND TRANSFER FORM

## APPENDIX F-3

## Project Acceptance and Transfer Form

PROJECT ACCEPTANCE AND TRANSFER FORM		
DATE:	AUTHORIZATION#:	REQUIRED APPROVALS
PROJECT:	SUBCONTRACT#:	FACILITIES INSPECTION
BUILDING:	SUBCONTRACTOR:	FACILITY MANAGER
An Inspection Of The Project Reveals That It Has Been Completed In Compliance With The Contract And Plans And Specifications:		PROJECT MANAGER
This Project Is Accepted For Final Occupancy And Is Hereby Transferred To Kaiser-Hill, L.L.C. For Operations.		PROJECT ENGINEER
The Above Project was completed through Integrated Work Control Package(s)		AREA CONSTRUCTION MANAGER
		K-H CONSTRUCTION MANAGER
		Area Utilities Manager
		Plant Alarms (B441)
		Telecommunications (T112A)
		Fire Protection Engineering (B130)
		Wackenhut Services (T119B)
		H&S Area Management (T452D)
		Environment Restoration (T893B)
		Waste Operations (B130)
		Criticality Engineering (T886B)
		Emergency Preparedness (B130)
		Subcontractor Administration
		Superintendent
		Close-Out Administration (B130)
		Plant Services (B331)
		Property Management (T334B)

APPENDIX F-4  
Project Final Closeout Form (FPCO)

WBS#:	B&R#:	PRN#:	Core Charge #:
<b>PROJECT CHARGE #'s:</b>			

☐ Cancelled    ☐ Scope/Estimate Only    ☐ Study    ☐ Complete    ☐ Procurement

Attach the "Partial" or "Complete Subcontract Closeout" forms. Financial closeout has been initiated for this charge number. This charge number will be closed to all charges on \_\_\_\_\_ (Date). All closeout activities must be completed by this time.

<b>SIGNOFFS:</b>		
<b>Name (Print)</b>	<b>Name (Sign)</b>	<b>Date</b>
<b>Project Engineer:</b> The subcontractors redline drawings are complete and in accordance with the designed scope of work and included all approved filed charges. Red-lined drawings have been received from the sub-contractor.		
<b>Project Manager:</b> All applicable sub-contracts have been accepted as complete, the design and construction management files have been consolidated into the project files, indexed in accordance with the Project File Index/Records Checklist and a lessons learned letter provided to the Closeout Manager for reference on future similar projects, if applicable.		
<b>Closeout Project Manager:</b> Ownership of the attached list of equipment, systems, structures and components have been transferred to the permanent property custodian, and the project files are ready to be archived.		

DATE OF CHARGE NUMBER CLOSEOUT: \_\_\_\_\_

Comments: (Reference Old Charge Number if appropriate)

<b>Records Management Manager:</b> The project files have been received and are acceptable. (Note: Project Closeout Manager is responsible for submitting FPCO to Records Management for signature).		

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## APPENDIX G Glossary and Acronyms

### ACROYMNS

AB	Authorization Basis
ACWP	Actual Cost of Work Performed ( <i>Actuals</i> )
AR	Administrative Record
ARAR	Applicable or Relevant and Appropriate Requirement
ASA	Auditable Safety Analysis
ASF(ASP)	Activity Screening Form ( <i>Activity Screening Process</i> )
BCP	Baseline Change Proposal
BCWP	Budgeted Cost of Work Performed ( <i>Earned Value</i> )
BCWS	Budgeted Cost of Work Scheduled ( <i>Budget</i> )
BEST	Basis of Estimate ( <i>Software Program</i> )
BFO	Basis for Operation
BIO	Basis for Interim Operation
CAA	Clean Air Act
CAB	Citizens Advisory Board
CAD/ROD	Corrective Action Decision/Record of Decision
CDPHE	Colorado Department of Public Health and Environment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CHWA	Colorado Hazardous Waste Act
COOP	Conduct of Operations
CPB	Closure Projects Baseline
CPM	Critical Path Method ( <i>schedule</i> )
CTR	Contractor Technical Representative
CV	Cost Variance ( <i>BCWP-ACWP</i> )
CWA	Clean Water Act
CWBS	Common Work Breakdown Structure
D&D	Decontamination and Decommissioning
DNFSB	Defense Nuclear Facilities Safety Board
DOE/DOE	Department of Energy/Rocky Flats Field Office
DOP	Decommissioning Operations Plan
DPP	Decommissioning Program Plan
DQO	Data Quality Objective
EAC	Estimate at Completion
EIS	Environmental Impact Statement
ERE	Environmental Readiness Evaluation
ER	Environmental Restoration
EV	Earned Value ( <i>BCWP</i> )
FFCA	Facility Facilities Compliance Act
FSAR	Final Safety Analysis Report
GSA	Government Services Administration
HASP	Health & Safety Plan
HUD	Housing Urban Development
HVAC	Heating, Ventilation, and Air Conditioning
ICCB	Internal Change Control Board ( <i>Kaiser-Hill Chaired</i> )
IGD	Implementation Guidance Document ( <i>for RFCA</i> )
IHSS	Individual Hazardous Substance Site
IM/IRA	Interim Measure/Interim Remedial Action
ISMS	Integrated Safety Management System
IWCP	Integrated Work Control Program
LCB	Life-Cycle Baseline
LLW	Low Level Waste

LOE	Level of Effort
LRA	Lead Regulatory Agency
MOU	Memorandum of Understanding
NEPA	National Environmental Protection Act
ORR	Operational Readiness Review
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
P&I	Planning and Integration
PAM	Proposed Action Memorandum
PBD	Project Baseline Document
PCS	Project Control System
PEP	Project Execution Plan
PM	Project Manager
PMB	Performance Measurement Baseline
PMM	Property Management Manual
PMP	Project Management Plan
POD	Plan of the Day
PTS	Progress Tracking System
PU&D	Property Utilization and Disposal
QA/QC	Quality Assurance/Quality Control
RCM	Radiological Control Manual
RCRA	Resource Conservation and Recovery Act
RDM	Readiness Determination Manual
RFCA	Rocky Flats Cleanup Agreement
RFCP	Rocky Flats Closure Project
RFETS	Rocky Flats Environmental Technology Site
RFLII	Rocky Flats Local Impacts Initiative (Public Group)
RLCP/RLCR	Reconnaissance Level Characterization Plan/Reconnaissance Level Characterization Report
RM	Responsible Manager
RSOP	RFCA Standard Operating Protocol
RWP	Radiological Work Permit
SAP	Sampling and Analysis Plan
SCCB	Site Change Control Board (DOE Chaired)
SDRM	Site Documents Requirements Manual
SERM	Site Engineering Requirements Manual
SES/USQD	Safety Evaluation Screen/Unreviewed Safety Question Determination
SME	Subject Matter Expert
SMP	Safety Management Program
SNM	Special Nuclear Material
SOW	Statement of Work
SRA	Support Regulatory Agency
STP	Site Treatment Plan
SV	Schedule Variance (BCWP-BCWS)
TRU	Transuranic
WAD	Work Authorization Document (contractual agreement between DOE and Kaiser-Hill)
WBS	Work Breakdown Structure
WCD	Work Control Document (used generically for all IWCPs, procedures, instructions, etc.)
WPD	Work Planning Document (precursor to the WAD documents intended plan for DOE approval)
WCF	Work Control Form

**TERMS & DEFINITIONS:**

**Activity.** A defined scope of work for designation of controls to maintain an adequate margin of safety against the hazards or other uncertainty presented by the work.

**Administrative Controls.** Provisions relating to organization and management, procedures, recordkeeping, assessment, and reporting necessary to ensure the safe operation of a facility.

**Administrative Request.** A request for Administrative support of maintenance, e.g., Standard Work Package, Preventive Maintenance Work Package.

**Auditable Safety Analysis (ASA).** A defensible safety analysis (similar to a SAR but with much reduced content and requirements) which is developed for a radiological facility. An auditable safety analysis:  
Provides systematic identification of hazards within a given DOE operation; and  
Describes and analyzes the adequacy of measures taken to eliminate, control or mitigate identified hazards. [DOE-EM-STD-5502-94]

**Authorization.** The granting of approval to operate a facility or process in accordance with the terms and conditions of a set of authorization controls. Authorization is provided by an regulator and/or legal authority.

**Basis.** Summary statement of the reason for the administrative and engineered controls, the administrative control program and the associated surveillance requirements. The Basis relates the credited assumptions made in the accident analysis to the requirements for safe operation.

**Building Type.**

- Type 1 – Building Free of Contamination
- Type 2 – Buildings without significant contamination or hazards, but in need of decontamination
- Type 3 – Buildings with significant contamination and/or hazards

**Construction.** For purposes of this document, the term referring to D&D, new or modified construction, and remediation work performed on Site.

**Construction Health and Safety Plan.** A written document prepared by the subcontractor that includes; the subcontractor's proposal for implementing Site CONSTRUCTION health and safety requirements, identification of subcontractor supervisor personnel, competent persons and qualifications responsible for health and safety performance, and proposed construction site health and safety orientation.

**Construction Specifications Institute.** Master system of specification guides developed by industry groups to be used for the establishment of contractual relations between parties involved in a CONSTRUCTION project.

**Contact Record.** A written documentation of agency conversations resulting in regulatory negotiations and decisions.

**Contractor's Technical Representative.** In accordance with the K-H Procurement System, CTRs act as the authorized representatives of the Company in performing such functions as approval of drawings, testing, approval of samples, inspection and monitoring of the subcontractor's work, and other functions of a technical nature not involving a change in work, prices, delivery, or terms and conditions of the subcontract. CTRs vary by project and are necessary for all service type requirements.

**Cross-Table Review.** A documented, critical review performed by peers who are independent of the work being reviewed. Each peer's independence from the work being reviewed means that the peer:  
Was not involved as a participant, supervisor, technical reviewer, or advisor in the work being reviewed. Has sufficient freedom from budget and line-management considerations of the development organization to ensure that the work is reviewed impartially.

A Cross-Table Review is an in-depth critique of assumptions or bounding conditions, calculations, alternate interpretations, methodology, and acceptance criteria employed, and of the conclusions drawn in the original work. The goal is to assess the adequacy of the original work, not to redesign it if it is deemed adequate. The Cross-Table Review is a team effort, with the peer review group and the members of the original planning team acting together, rather than submitting comments between groups. This method embraces the opportunity for in-depth discussion of questions and ideas

**Data Quality Objectives (DQOs).** DQO's are qualitative and quantitative statements derived from the DQO process that clarify technical and quality objectives, define the appropriate type of data, and specify levels of decision error that will be used as the basis for establishing the quality and quantity of data necessary to support facility disposition decisions.

**Davis-Bacon.** Work that is covered under the provisions of the Davis-Bacon Act, and is considered to be CONSTRUCTION type work and cannot be assigned to contractor or subcontractor's maintenance forces.

**Engineering Services.**

**Preliminary Design (Title I)** Preliminary design that extends the Conceptual Design and the Design Criteria to determine the requirements and criteria which will govern the Title II design. Tasks include preparation of preliminary planning and engineering studies, preliminary drawings and outline specification, life-cycle cost analysis, preliminary cost estimates, and scheduling for project completion. Preliminary design provides identification of long lead procurement items and analysis of risks associated with continued project development.

**Definitive Design (Title II)** Definitive design that continues the development of the project based on the approved Title I design. Definitive design includes any revisions required of the Title I effort; preparation of final working drawings, specification, bidding documents, cost estimates, and coordination with all parties which might affect the project; development of firm construction and procurement schedules; and assistance in analyzing proposals or bids.

**Title III Services** Service activities required to ensure that the project is constructed in accordance with approved drawings and specifications and that the quality of materials and workmanship is consistent with the requirements of a project.

**Design-Bid-Build Method.** Separate subcontracts are issued for the design and the construction.

**Design/Build Method.** A single subcontract is issued for both the design and construction.

**Design Criteria.** Translates the requirements from the URD into design parameters. It contains technical data and other project information developed during project identification and planning, conceptual design, and preliminary design phases.

**Environmental Degradation.** Conditions adverse to the safety of the environment that *may* impact personnel and public safety within and outside of RFETS boundaries.

**Environmental Regulatory Compliance Facilities, Systems, or Hardware.** Any facility, system, or hardware used for containing, monitoring, moving, processing, or analyzing environmentally significant items or events including but not limited to:

- Air monitoring stations.
- Secondary containment of liquids.
- Waste management systems, primary and ancillary.
- Tanks.
- Data monitoring or analysis equipment.
- Significant controlling software.

**Facility.** Any equipment, structure, system, process, or activity that fulfills a specific purpose. [DOE M 232.1] The definition of facility most often refers to buildings and other structures, their functional systems and equipment, and other fixed systems and equipment installed therein to delineate a facility. However, specific operations and processes independent of buildings or other structures (e.g., waste retrieval and processing, waste burial, remediation, groundwater or soil decontamination, decommissioning) are also encompassed by this definition. [DOE-STD-3009-94] For the purpose of this procedure, the facility designation is expanded to include any formally designated building, site, structure, area, or project (such as Building 371, PADs, Tents, or Ponds) where a formal work authorization must be granted prior to conducting work.

**Facility Disposition.** The disposition of a facility post-operations and maintenance. It *may* include the following activities: deactivation, decontamination, decommissioning, dismantlement, and demolition. All lead toward environmental remediation/restoration. See Section 1 for definitions of: deactivation, decontamination, decommissioning, dismantlement, and demolition

**Graded Approach.** A process by which the level of analysis, documentation, and actions necessary to comply with a requirement are commensurate with:

- Relative importance to safety, environment, safeguards, and security
- Magnitude of any hazard involved
- Life-cycle stage of the facility or activity
- Programmatic mission of the facility or activity
- Particular characteristics of the facility or activity
- Other relevant factor, as appropriate
- The Quality Assurance (QA) Rule (10 CFR 830.120) and DOE Order 5700.6C are applied to the Site through the use of a graded approach. In order to ensure the most efficient use of resources, a graded approach is used to determine the rigor with which the QA requirements are applied to a specific facility or activity. This approach provides the flexibility to implement the programs in a way that best suits the facility or activity while maintaining full compliance with the QA Rule and DOE Order 5700.6C.

**Hazard.** A source of danger (i.e., material, energy source or operation) with the potential to cause illness, injury, or death to personnel or damage to a facility or to the environment (without regard for the likelihood or credibility of accident scenarios or consequence mitigation). [10 CFR 830.3]

**Hazard Analysis.** The determination of material, system, process, and facility characteristics that can produce undesirable consequences, followed by the assessment of hazardous situations associated with a process or activity. Largely qualitative techniques are used to pinpoint weaknesses in design or operation of the facility that could lead to accidents. [DOE-STD-3009-94] (e.g., JHA, ALARA Review, etc.).

**Hazard Categories.** The consequences of unmitigated releases of radioactive and/or hazardous material are evaluated and classified by the following nuclear hazard categories:

Hazard Category 1: The hazard analysis shows the potential for significant off-Site consequences.

Hazard Category 2: The hazard analysis shows the potential for significant on-site consequences.

Hazard Category 3: The hazard analysis shows the potential for only significant localized consequences. [DOE 5480.23]

**Hazardous Material.** Any solid, liquid, or gaseous material that is toxic, explosive, flammable, corrosive, or otherwise physically or biologically threatening to health. Oil is excluded from this definition. [DOE 5480.23] Solid, liquid, or gaseous substances in quantities that either alone, when combined with another substance through a credible mechanism, or when coming in contact with an available energy

source, are determined to be capable of posing an unacceptable risk to the environment or to the health and safety of the workers or the public. This includes radiological, non-radiological and mixed materials that are toxic, explosive, flammable, corrosive, or otherwise physically or biologically health threatening.

**Health and Safety Plan (HASP).** A safety analysis for facilities or operations involving hazardous waste based on the minimum requirements of 29 CFR 1910.120, *Hazardous Waste Operations and Emergency Response*.

**Hold Point.** A step in the work package where work is not allowed to proceed until the step is complete and signed, e.g., inspection point, verification point.

**Independent/Peer Review.** An critical review performed by peers who are independent of the work being reviewed. Otherwise known as a Cross-Table Review.

**Integrated Safety Management (ISM).** ISM is the systematic integration of safety into management and work practices at all levels so that missions are accomplished while protecting the public, the worker, and the environment. This is to be accomplished through effective integration of environment, safety and health into work planning and execution. In other words, the overall management of safety functions and activities becomes an integral part of mission accomplishment.

**Job Hazard Analysis (JHA).** A documented process whereby the steps for a work activity are analyzed for hazards and control measures prior to the work being performed.

**Non-nuclear Authorization Basis.** Those aspects of the conduct of the activity and associated operations relied upon by contractor management to authorize operation. These aspects are considered important to conducting the activity safely. The non-nuclear authorization basis is described in documents such as the Health and Safety Plan (HASP), Auditable Safety Analysis (ASA), Integrated Work Control Program (IWCP), Radiological Work Permit (RWP), or other work control documents depending on the inventories of hazardous materials or hazards estimated to be inherent in the activity.

**Notes.** A statement that provides important supplemental information. Notes can pertain to action steps. When associated with action steps, the note precedes the step or steps to which it applies. Notes do not contain action steps. For emphasis, the caution is enclosed in a box and labeled NOTE.

**Nuclear Activity.** See the following definition for Nuclear Facility. Note that definition of Nuclear Facility, as provided by 10 CFR 830.3 includes "those activities or operations that involve radioactive and/or fissionable materials in such form and quantity that a nuclear hazard potentially exists to the employees or the general public". [10 CFR 830.3]

**Nuclear Facility.** This manual applies to nuclear facilities, as generally defined by 10 CFR 830.3. The specific definition of nuclear facilities, as used in the scope of this manual, is limited to Hazard Category 2 and 3 facilities at the Site. When cited in this manual, nuclear facilities means Hazard Category 2 and 3 facilities only. The definition of Hazard Category 2 and 3 is as specified by DOE Order 5480.23 and DOE Technical Standards DOE-STD-1027-92, *Hazard Categorization and Accident Analysis Techniques for Compliance with DOE Order 5480.23*, *Nuclear Safety Analysis Reports*, and DOE-EM-STD-5502-94, *Hazard Baseline Documentation*. For information, the definition for nonreactor nuclear facility is provided in 10 CFR 830.3:

**Nuclear Authorization Basis.** Those aspects of the nuclear facility design basis and operational requirements relied upon by DOE to authorize operation. These aspects are considered to be important to the safety of the facility operations. The authorization basis is described in documents such as the facility Safety Analysis Report and other safety analyses, hazard classification documents and the Technical Safety Requirements, DOE-issued safety evaluation reports, and facility-specific commitments made in order to comply with DOE rules, Orders, or policies.

**Planning Team.** The team assigned the responsibility of planning the work for both the Medium and High Planning Levels.

**Project Execution Plan (PEP).** A Project Management Plan (PMP) and Project Execution Plan (PEP) are used synonymously throughout this manual. PMPs/PEPs define the project charter, work plan, and requirements implementation. The charter includes the project vision, mission, critical success factors, and performance measures. The work plan includes the Work Breakdown Structure (WBS), responsibility assignment, scope of work, estimated schedule, estimated cost for the project, and project controls. A PMP Template can be found in the K-H Planning and Integration manual of standards, Standard 16.

**Project Team.** Participants on a project including the Program Manager, Project Manager, Project Engineer, Building/User Representatives, Contractor Representative, Construction Engineer, appropriate subject matter expert(s), and other personnel assigned to the project.

**Public.** All individuals outside the DOE Site boundary. [DOE-STD-3009-94]

**Quality Assurance Plan.** A formal document describing necessary quality assurance, quality control, and other technical activities that are implemented to ensure that the results of the work performed will satisfy the stated performance criteria.

**Remediation.** Activities conducted to reduce potential risks to people and/or harm to the environment from radioactive and/or hazardous substance contamination.

**Responsible Manager (RM).** The manager directly responsible and accountable for the development, implementation, and performance of the work (e.g., Facility Manager, Building Manager, Operations Manager, Maintenance Management, and Project Manager)

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**Responsible Organization.** The organization that is assigned by the MM to have the primary or lead responsibility for the resolution of a deficiency or completion of a required action on a Work Request or Administrative Request. The Responsible Organization can be any site organization, including that of the originating RM.

**Safety Basis.** The combination of information relating to the control of hazards at a facility (including design, engineering analyses, and administrative controls) upon which DOE depends for its conclusion that activities at the facility can be conducted safely. [10 CFR 830.3]

**Scope.** Statement specifying the performance boundaries of the work activity to be executed. (e.g., remove/install piping, run conduit, install fire control panel etc.)

**Scope of Work.** Refers to the project or activity baseline that defines technical objectives and general approaches in terms of design, execution, and performance requirements, criteria, and characteristics derived from what the project is intended to accomplish.

**Skill-of-the-Worker.** Those skills that a journeyman craftsman/technician **Should** be able to perform commensurate with his/her journeyman/skill training without specific task instructions (i.e., instruct craft to install hot water heater element without providing detailed instructions). Skill-of-the-Worker is applicable to WPs, EDPs, TPs and Minor Maintenance.

**Slab.** The slab is the foundation, footprint, or pad that remains following demolition of the facility or building.

**Source Document.** Documents or references that support, initiate, or cross-reference the Work Control Form (WCF). These documents *may* include: (CCCP)

Requirement documents (such as DOE orders, Engineering specifications, or administrative or technical procedures)  
Deficiency corrective action documents (such as audits, self-assessments, NCR's, safety concerns, or Occurrence Report actions)

**Statement of Work (SOW).** Describes the essential and technical requirements for items, materials, or services to be provided.

**User Requirement Document (URD).** Translates the needs and requirements for the project into a baseline document in which the physical requirements, safety requirements, national codes and standards, Site Engineering Standards, and DOE orders are identified and agreed to by the appropriate parties. These will be the requirements that must be met and complied with and will provide the basis for monitoring and verifying compliance as the work progresses.

**Work.** Any project or activity that has the potential to produce damage to the environment, injury to the public or worker in the event of an accident or process upset.

**Work Authorization Process.** The planning and preparation for the conduct of an activity, which result in a documented safety basis and a verifiable ready to proceed status.

**Work Control Documents.** Those documents that are used directly to perform tasks in preparation for or in the performance of an activity, such as IWCP work packages, technical procedures, and Engineering Design Packages (EDPs).

**Work Control Form (WCF).** The form utilized to initiate, process, and assign a Work Request or Administrative Request to the Responsible Organization.

Figure 2-3 - Detailed Facility Disposition Activity Flow Chart

